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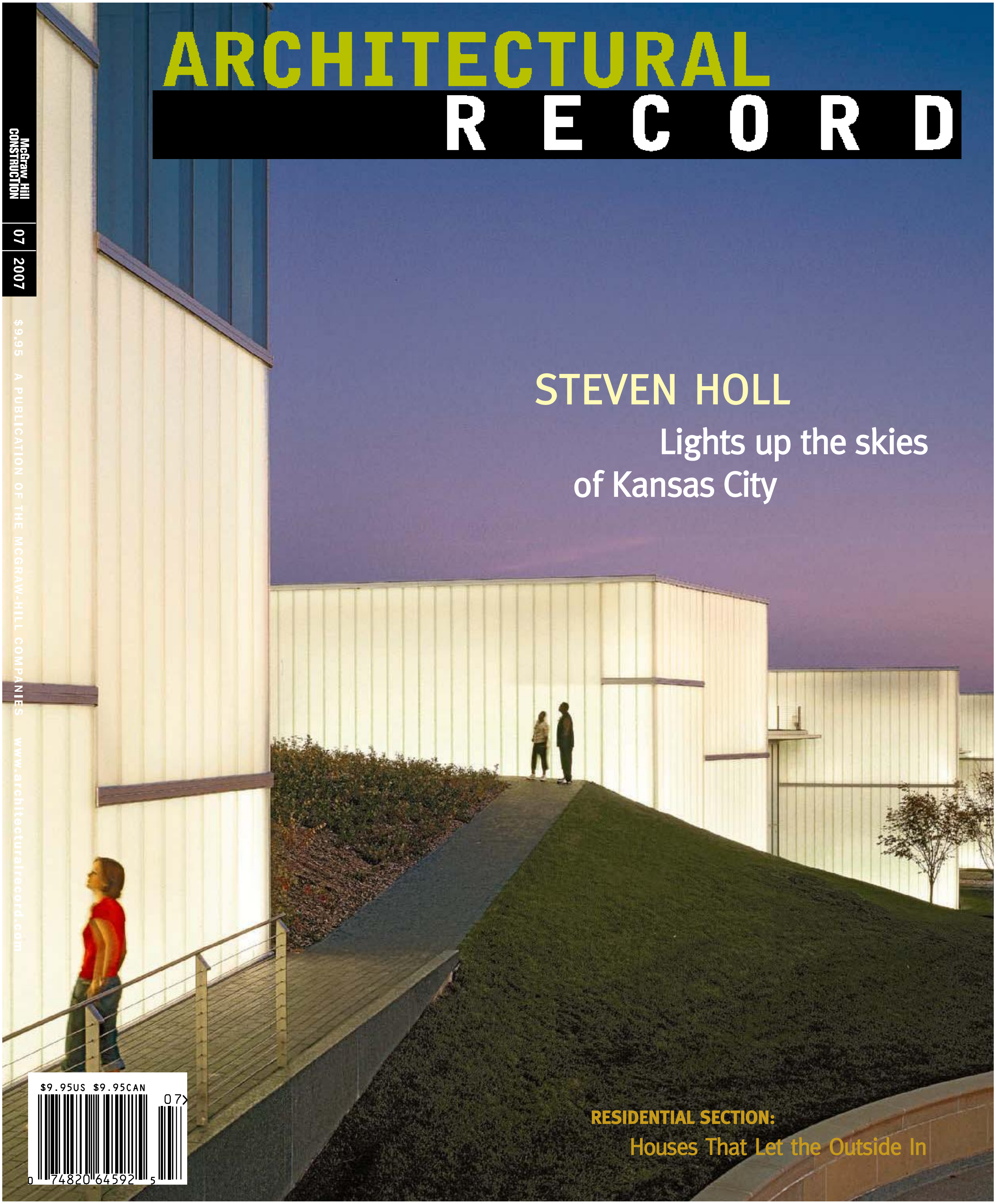

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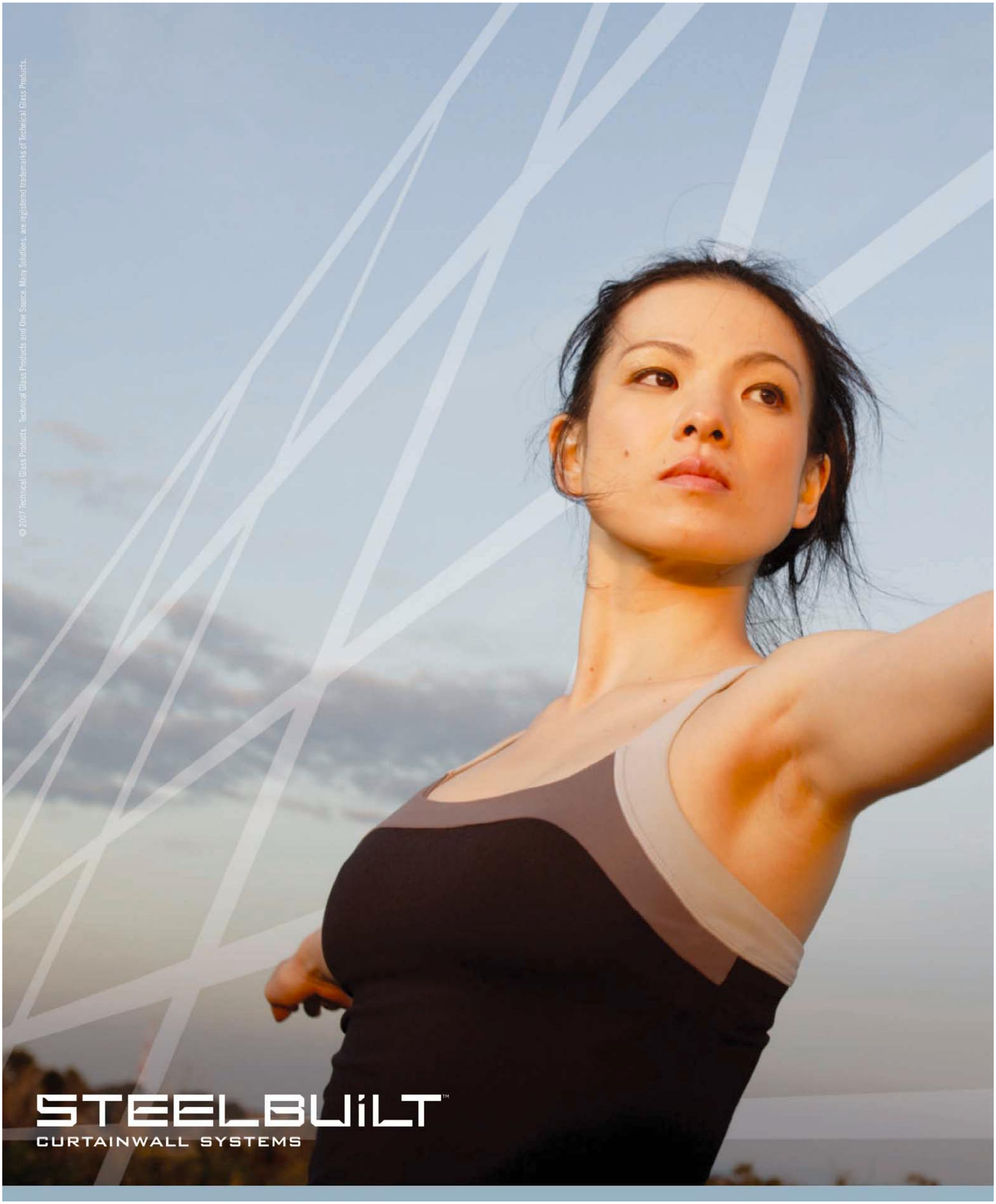

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The Masterpiece Series features a chiseled facade with sharp angles, bringing a bold, dimensional aspect to oven design that makes a statement of sophistication in today's contemporary kitchen. This design elevates the oven from mere appliance to coveted centerpiece, making it the focal point of any culinary space. And like every Thermador before it, this oven boasts an array of advanced features that make its performance as impressive as its design.

The oven's roster of features is designed to empower busy individuals wishing to create high-quality meals by making every aspect of oven use easier, faster and more efficient. Take the CookSmart® function for example. In the DM-Series, this program automatically calculates and converts traditional recipe cooking temperatures and times for use with the fast convection mode, so users can easily prepare their favorite recipes in a fraction of the time.

Another advanced feature designed to improve cooking efficiency is True Convection, which employs six vents in conjunction with a third heating element to deliver superior hot air circulation in convection mode. The result—dishes cooked far more evenly than those prepared in traditional convection systems.

The Masterpiece Series pays tribute to excellence in American design with numerous convenience features that make life easier for busy home chefs. The massive oven cavity will accommodate even the largest dishes and is lit by a powerful halogen lighting system for unmatched illumination. Its unique design also enhances its functionality, as cooks enjoy excellent visibility of their creations through the oversized viewing window. The six-way adjustable oven racks offer numerous options for precise food positioning as well as the ability to heat multiple items at once, while advanced third-element convection virtually eliminates flavor transfer between foods.

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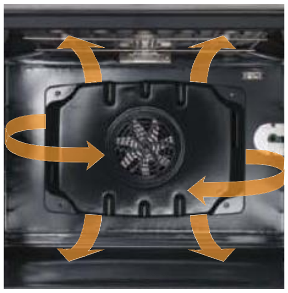

True Convection

For those who want to start cooking the minute they get home, the True Convection mode's lightning-fast preheat comes to the rescue, heating the oven to 325°F in just seven minutes—the industry's best. The Masterpiece Series is available in five different configurations and sizes, giving homeowners the flexibility to select the exact model to suit their particular needs.

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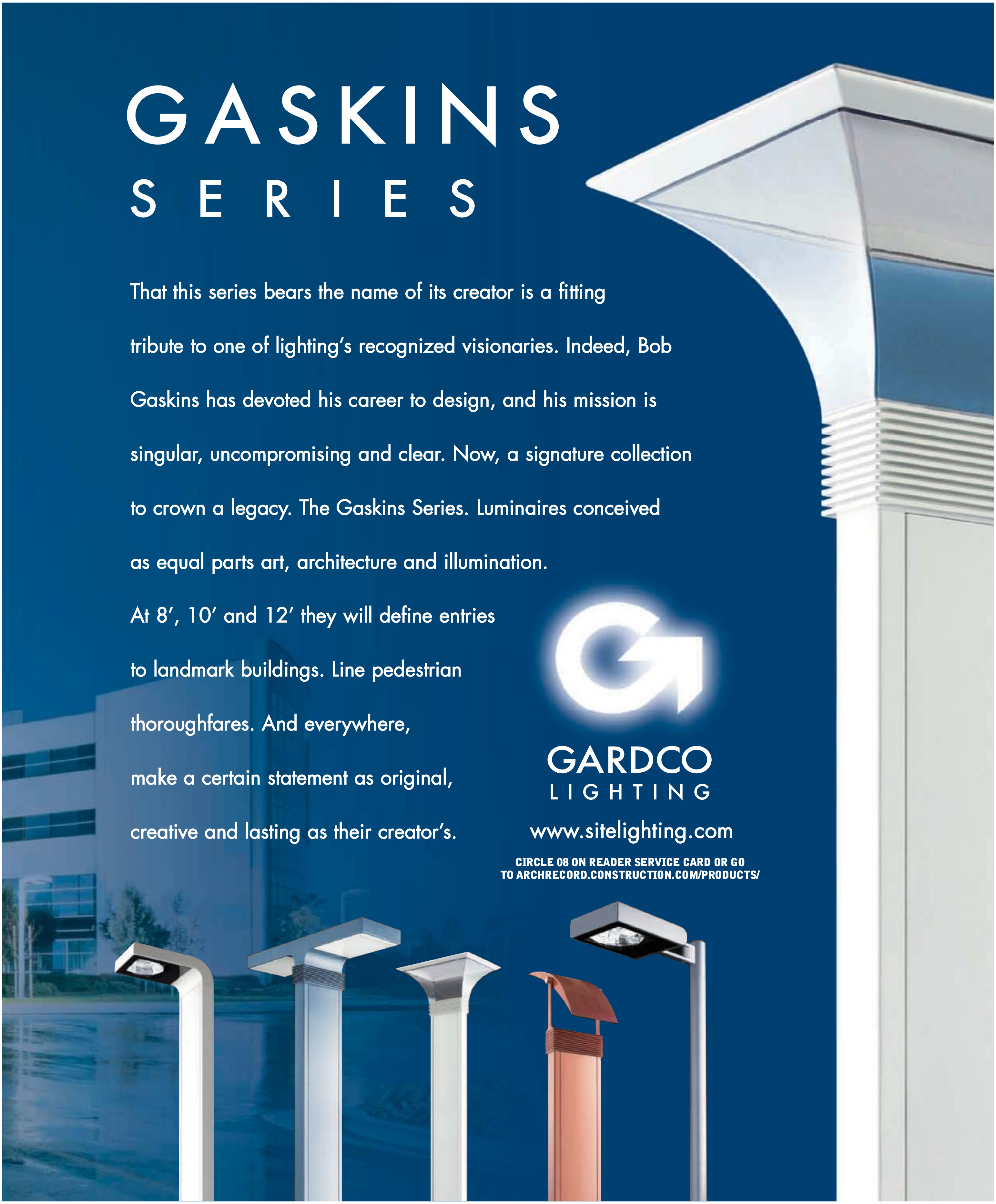

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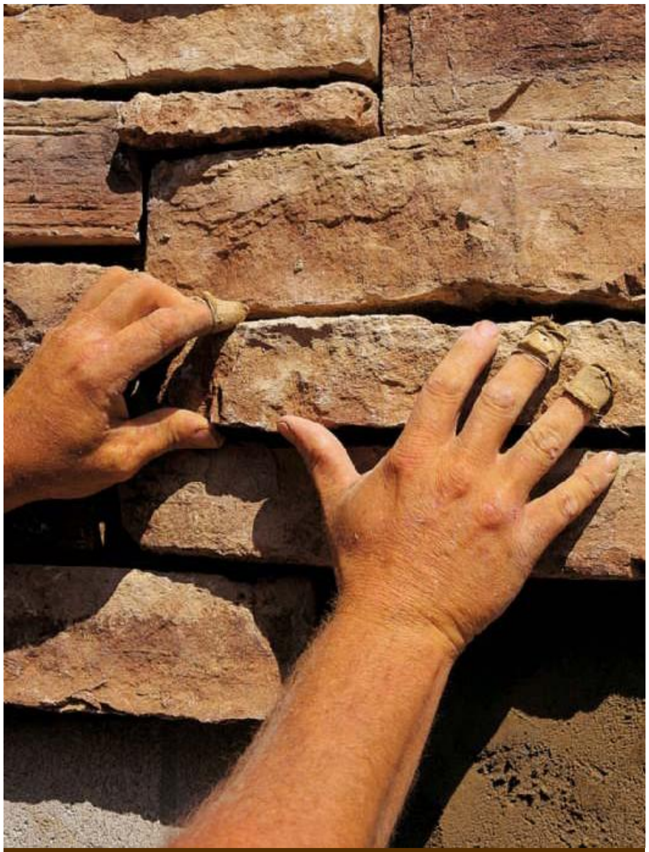

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On the Cover: *Steven Holl Architects' Nelson-Atkins Museum of Art. Photograph by Roland Halbe.*
Right: *Weiss/Manfredi's Olympic Sculpture Park. Photograph by Paul Warchol.*

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Online Exclusive: Ten recent school projects look beyond satisfying the demand for classrooms and demonstrate an **uncommon responsiveness** to context and students' needs.

residential section: inside out

Courtyards, outdoor living areas, access to natural light and air—these are just a few of the ways architects are addressing the design of homes that convey as much about **porosity and openness** as they do about **protection and shelter.** Web exclusive: Photos of the Pierre Thibault-designed Les Abouts house and the Low-Country Residence by Frank Harmon that you'll only see at ArchitecturalRecord.com!

project portfolio

A bevy of stunning cultural buildings, from Santiago Calatrava's Reina Sofía Palace of the Arts opera house in Valencia, Spain, to Steven Holl Architects' Bloch Building at the Nelson-Atkins Museum of Art in Kansas City, Missouri, prove that **architects across the globe** are celebrating the arts with graceful forms.

blogs and forums

Off the Record Written by the staff of *Architectural Record* where the magazine's team of experienced, award-winning editors offer their insightful, informal, opinionated takes on architecture-related trends, conferences, exhibitions, projects and personalities. **Your voice matters**—and we have provided you with the ideal forum to express your ideas, opinions, suggestions, and gripes. Our discussion forums, which are open to all, include such topics as Green Building Projects, Virtual Design, Practice Matters, and a forum for younger architects. You can also suggest and create your own discussion threads.

Photographs, from top: Rosa Parks Elementary School, Redmond, Washington, by Mahlum Architects; photograph © Benjamin Benschneider. Les Abouts House, Saint-Edmond-Grantham, Quebec, Canada, by Atelier Pierre Thibault; photograph © Alain LaForest. Bloch Building, Nelson Atkins Museum of Art, Kansas City, Missouri, by Stephen Holl; photograph © Roland Halbe. Camouflage House, Green Lake, Wisconsin, by Johnsen Schmaling Architects; photograph courtesy of Johnsen Schmaling Architects. Yew Dell Gardens, Crestwood, Kentucky, by De Leon + Primmer; photograph courtesy of De Leon + Primmer. Bridge at Indianapolis Museum of Art, by Mary Miss and Guy Nordenson; photograph courtesy of Mary Miss.

residential: house of the month

Only at ArchitecturalRecord.com: Milwaukee-based Johnsen Schmaling creates a buzz with the Camouflage House, a linear home on Wisconsin's Green Lake that uses a simple palette in a surprising, contemporary take on Wisconsin's historic lake-cottage architecture.

archrecord2

archrecord2 introduces De Leon + Primmer, a firm adding to the evolving built environment of Louisville, Kentucky. We also reveal a winning competition for a listening room constructed of cardboard. Online, meet other talented young designers in Design, Work, and Live, and join the conversation in Talk.

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Page

163-167

Market Trends Drive the Need for Effective Sound Solutions

Acoustically enhanced gypsum board and other options offer efficient ways to build better partitions

Provided by

National Gypsum

Learning Objectives

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- Discuss trends driving the need for wall partitions that can reduce sound transmission
- Explain key acoustical terms and concepts
- Specify the appropriate sound control system for your projects

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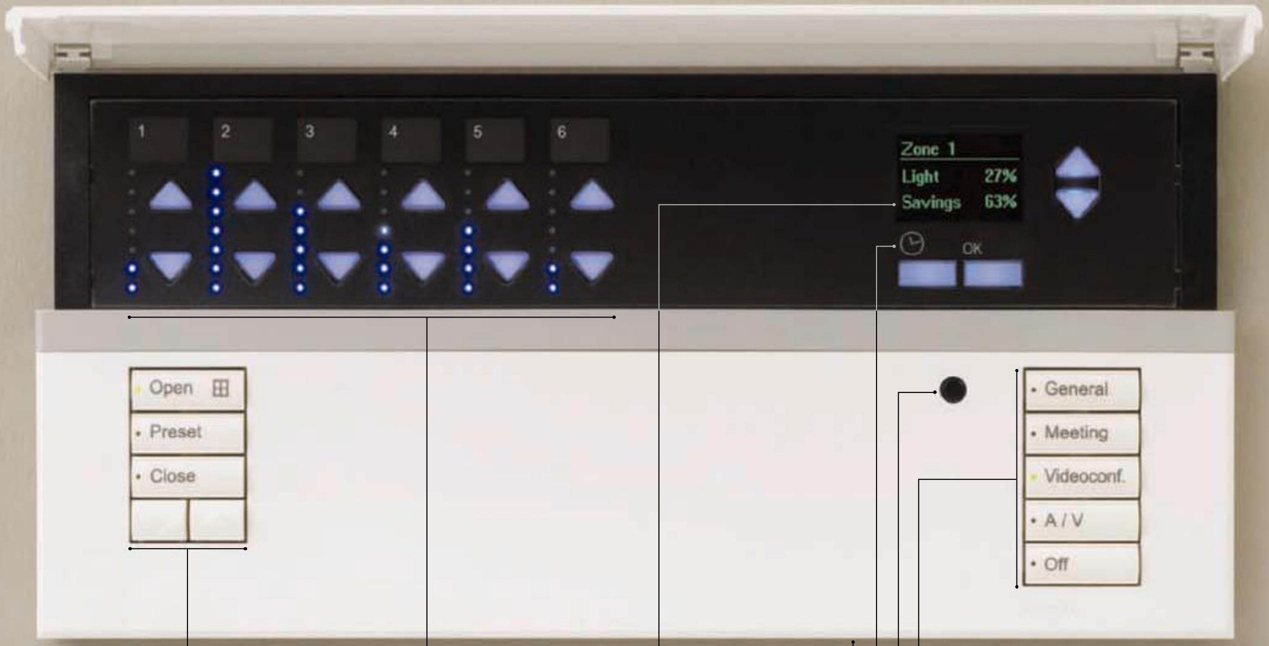
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Moving on down the road

Editorial

By Robert Ivy, FAIA

Beneath the veneer of respectability or trustworthiness, a little bit of Jack Kerouac lurks in us all. Haven't you, in the summer doldrums, wanted to chuck a few things in the back of a black convertible and hit the road—the mythic, American asphalt dreamstream that seduces us with the promise of abandonment and freedom? Bad boy Kerouac's travels, and the metaphorical, picaresque adventures he encountered, lie at the core of a persistent 21st-century dilemma: Mobility runs counter to environmental responsibility.

Unlike the heady days of the mid-20th century, when gasoline burned, burned, burned for pocket change, today we take a measured approach when confronting gas pumps employing higher math: A $70 fill-up, conveniently debited from the checking account, to reach the cabin by the lake in the four-wheel-drive SUV. How can we reconcile our desire—for motion, mobility, ultimate freedom—with finite resources? The road looks tough since Kerouac's '47 Caddie ran out of gas.

The relationship of movement and architecture, seemingly disparate terms, is drawing the attention of architects, scientists, engineers, planners, and politicians with renewed vigor. Routinely, even heroically, architects have planned intricate transportation centers at the interface of the pedestrian, the automobile, buses, light rail, trains, and airlines. At its most complex (think Reed and Stern and Warren and Wetmore's Grand Central Station in 1913) and its most recent incarnations, we have encouraged the ease of use of public transportation.

Movement has taken new turns. In recent years, the Dutch architect Francine Houben, who leads the firm Mecanoo, took "mobility" as a central concern in her intellectual and practice life, seeking fresh approaches to notions of transportation, commerce, and housing, for example, expanding on the popular idea of mixed use to include strategies of transportation and access to building projects. Internationally, architects are considering not only housing, but the combined effects of communities of buildings: relationship to transit, to workplace, to child care, to recreation. Architecture, whose gravity-induced fixity includes the study of "statics," reinvents itself as a discipline.

At another level, seemingly fixed structures are becoming kinetic. Think of Peter Eisenman's Phoenix Stadium, with its retractable roof and movable natural grass field, where the entire playing surface can be rolled outside the building for maintenance or scarce rainfall. Think of Calatrava's poetic Milwaukee Art Museum, with wings that open and close. The Chicago architect Jeannie Gang has pursued a fascination for motile structures, including the construction of the Starlight Theatre at Rock Valley College in Rockland, Illinois, whose roof folds back for skylit performances.

Sometimes we prefer to truck it in. Prefabrication has intrigued a new generation of architects, such as Jennifer Siegal and her Office of Mobile Design, Philadelphia's Kieran and Timberlake and their Loblolly House, Shigeru Ban and LOTEK who follow in the footsteps of Jean Prouvé's Maison Tropicale (1951) and Paul Rudolph's proposed prefabricated tower (with 4,050 units) to create individual components and entire buildings that can be hauled from place to place. The inventor of things that fold (toys, structures), Chuck Hoberman, has engineered a "Rapidly Deployable Structure" that can be erected in the field, such as for the military, in less than three minutes by four people.

On display and the subject of intense discussion at a recent June conference at the University of Hawaii at Manoa ("Architecture + Movement," an international symposium on Asia Pacific architecture), the architect William Mitchell presented the multidisciplinary research of his students at MIT, radical in its approach. Rather than propose a new way of building, Mitchell unveiled the design for a new form of conveyance—a two-person, stackable, folding car for zipping from transit to grocery. Theoretical and headed for testing as a prototype, the MIT vehicle brings architectural thinking to an intractable urban dilemma, and if more fortunate than the electric car, it could transform urban streets.

Architects may be neither regional planners, politicians, economists, or inventors. We may be artists, and often eager to travel, but comprehensive vision convinces us that Kerouac's road has limits. If we are clever, we can change gears and keep on moving. If we are clever, we can redesign the road.

Robert Ivy

PHOTOGRAPHY: © ANDRÉ SOUROUJON

Letters

A missed opportunity

Your May cover story on Edward Larrabee Barnes [page 166] did little to explain the posthumous awarding of the AIA Gold Medal to this great architect. Fred Bernstein's article seemed more focused on the work of other architects' additions to Barnes's original creations than on recognizing the remarkable influence Barnes had on American architecture or his extraordinary legacy of notable architects practicing today. As a former employee of his and one of the dedicated supporters who spearheaded the submission for the award, I can attest that the true impact of Barnes's practice, as indicated by the supportive testimonials within the application, were not conveyed in the article. Example statements from the submission are:

The New York, Kansas City, and Chicago chapters of the American Institute of Architects: "Mr. Barnes changed the face of the architectural community in New York in the 45 years of his practice. He took seriously the responsibility of training architects who worked in his office, and fostered an atmosphere of high aspirations, trusted collaboration, and delight in the creative process. Many of our country's most prominent practitioners are very proud Barnes alumni."
Kevin Roche, FAIA: "Ed Barnes was an exemplary architect—totally committed, totally absorbed, and totally dedicated to creating the finest, most responsible, and beautiful work. His iron will, fierce determination, and relentless energy in the pursuit of excellence produced a body of work virtually unparalleled in the last 30 years."
Henry Cobb, FAIA: "Barnes's influence has been broad and deep. The built works by Barnes that I have always found most engaging are those that display his exceptional skill and inventiveness in dealing with problems of aggregation and assemblage, as manifested in a wide variety of building types and settings."
Agnes Gund: "As a collector, what most stands out for me is the exceptional sensitivity Ed brought to his museum designs. Each visit to one of his museums brings me a renewed sense of respect and joy for his extraordinary vision. His galleries never call attention to themselves, nor do they compete with the art. Instead, these gracious, light-filled spaces offer visitors the very best, but all-too-rare, kind of museum experiences—ones in which they can focus completely and appreciate fully the works of art exhibited in them."
Toshiko Mori: FAIA: "In his long career as an architect, Ed influenced the design of the built environment worldwide. He has left the important legacy of his signature design, which reflects an era when the European Modernist language derived from the Bauhaus tradition was assimilated into the mainstream of American culture."
Bruce Fowle, FAIA: "As a young architect starting practice in the 1960s, Ed was my idol. His houses and institutional buildings had a unique balance of simplicity, elegance, and warmth that greatly influenced my work, and that of numerous others. His was a personal style of Modernism that emanated from a commitment to honesty of expression, integrity, and a flair for the human spirit."
Robert Campbell, FAIA: "Ed's best work is notable for crisply geometrical buildings, often of richly textured wood or shingle. The Haystack Mountain School of Crafts influenced a whole generation of other architects, notably those who created such places as Sea Ranch, who, like Barnes, were seeking a humane and vernacular version of Modernism."
Terrence Riley: "As Modernism developed and continues to develop, its fundamentally European roots are replenished with cultural, technologic, and social resources from around the globe. In the second half of the 20th century, Barnes's work was seminal in the development of a modern architectural language that had an indelible American stamp."
Peter Blake, FAIA: "He seems to have grasped what few others understood as clearly or creatively—that a designed building in a participatory democracy should respond to a great variety of factors and that its ultimate form should express those conditions and demands rather than provide a memorial to its architect or to those who paid the bill."

Included in the long list of prominent architects who worked in the Barnes office and have been recognized as Fellows of the AIA are Alexander Cooper, Charles Gwathmey, Warren Gran, John M.Y. Lee, Herbert Newman, Jaquelin Robertson, and Robert Siegel.

The recognition of Ed Barnes's influence on our profession was long overdue. His previous submission for the Gold Medal was toward the end of his career in 1988—a difficult time when Postmodernism was foremost in the minds of the media and his steadfast commitment to his own style of Modernism was, prematurely, considered by many to be passé. Today, we have the benefit of hindsight and enlightenment—and with this award, we are able to warmly reflect on, and celebrate, Edward Larrabee Barnes as a remarkable person with many unparalleled accomplishments. The article in RECORD was a missed opportunity.
—Bruce S. Fowle, FAIA
Senior Principal, FXFOWLE

(For further discussion, please visit our Forum section at forums.construction.com.)

Overcoming narcissism

Juhani Pallasmaa's essay "On History and Culture" [June 2007, page 105] decries "the stage of today's egotistical and narcissistic architectural theater" while idealizing the creative talents of the architect as artist, citing Alvar Aalto, Louis Kahn, Erik Gunnar, and Sigurd Lewerentz. But narcissism is the shadow side of the artistic temperament, and the current "experiential and emotional shallowness" that Pallasmaa abhors reflects the inevitable consequences of pursuing an ideal of artistic expression in a culture where narcissism is the governing principle. I suspect the authenticity that Pallasmaa seeks can no longer be achieved through emulation of the ideal of the architect as culture hero, as Ayn Rand unintentionally illustrated with her portrayal of the architect-run-amok Howard Roark in *The Fountainhead*. The architecture of narcissism is in fact a concretization of "the cultural and mental structures of … (our) society." It rings hollow because our culture *is* hollow. Artists can never transcend the time into which they are born; they can only express the forces at work in that time. And Aalto's vision of architecture as paradise cannot impact the stark reality we face, on an overpopulated planet with rapidly dwindling options. I propose we get over this idea of architecture as art, roll up our sleeves, and try to save what we can. Narcissism can be described as attachment to an image of oneself used as a defense against dystonic forces, such as a hostile parent or environment. We will not overcome narcissism in the culture without overcoming it in ourselves, and the place to start is with obsolete idealistic images of the architect's artistic calling.
—A. Vernon Woodworth, AIA
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GYPSUM NEXUS

Winter '07

1 Gypsum Association Posts Two-Hour CEU Program on Website
2 Gypsum Association Offers Press Kit
Gypsum Association Updates Website
3 A Distinction with a Difference
New Gypsum Association Member
4 Essentials from the Gypsum Association

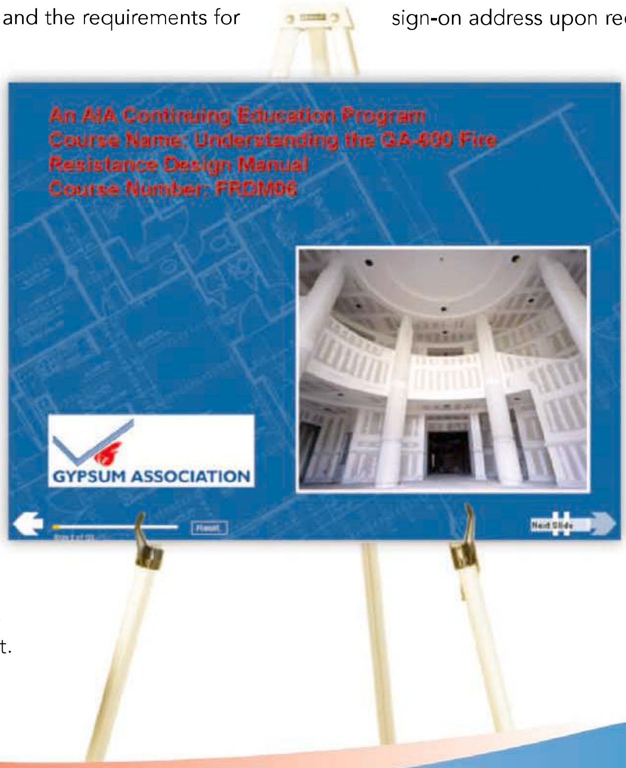
GYPSUM ASSOCIATION

GYPSUM ASSOCIATION POSTS TWO-HOUR CEU PROGRAM ON WEBSITE

The Gypsum Association recently posted a new training program on its website (www.gypsum.org). The program offers two American Institute of Architects (AIA) Health, Safety, and Welfare learning units for its successful completion. The subject matter of the program is the Association's flagship publication, ***GA-600, Fire Resistance Design Manual (FRDM)***, and it highlights several of the manual's instructional sections including the general introductory information, the general explanatory notes, and the requirements for fire protection and sound control.

In addition, the program provides guidance on interpreting and understanding the designs found in the manual.

The two-hour program consists of a truncated version of the FRDM, which participants can download at the beginning of the program, a series of slides that walk participants through the several sections of the FRDM – including several true-or-false review questions - and an interactive quiz, which informs participants whether answers given are correct or incorrect as the questions are answered. Participants must achieve a score of 80 percent or better to earn the credits. Once the quiz is completed, participants can print out their scores and fax them in to the Gypsum Association, where they will be reported to AIA for credit.

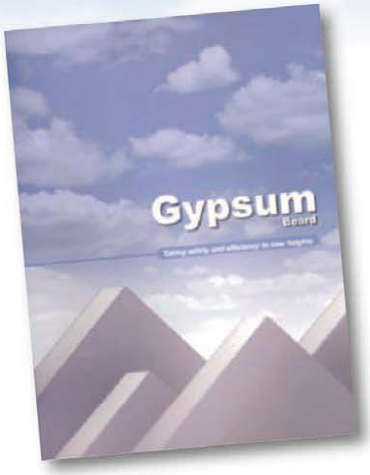


An AIA Continuing Education Program
Course Name: Understanding the GA-600 Fire Resistance Design Manual
Course Number: FRDM06

Because the program typically requires two hours to complete, it has been designed so that participants can log on and off and back on again, and return to the point in the program where they left off. A participant uses his or her email address as a sign-on ID and his or her AIA member number, or a random eight-digit number if AIA credit is not required, as a password. If someone forgets their sign-on information, the system will email that information to the sign-on address upon request.

And while the learning units offered by the program can currently be accrued only for AIA accreditation purposes, anyone with access to the Gypsum Association website can take the course. By opening the Education tab on the navigation bar, a participant simply selects the GA600 Online Course button to initiate the program. First time users will need to create a profile that will enable them to revisit the site as many times as necessary to complete the course. Once in the system, participants will be able to access new programs as they are added.

GYPSUM ASSOCIATION OFFERS PRESS KIT



The Gypsum Association has assembled a press kit designed for contractor organizations and suppliers to use to promote the use of gypsum products in their local media markets. The kit includes a series of clips of articles that explain the benefits of using gypsum board building systems in a variety of applications, including Area Separation Walls, fire-rated construction, and sound attenuating assemblies. The kit also includes draft versions of these articles that can be submitted to local media for customization and publication in the local market.

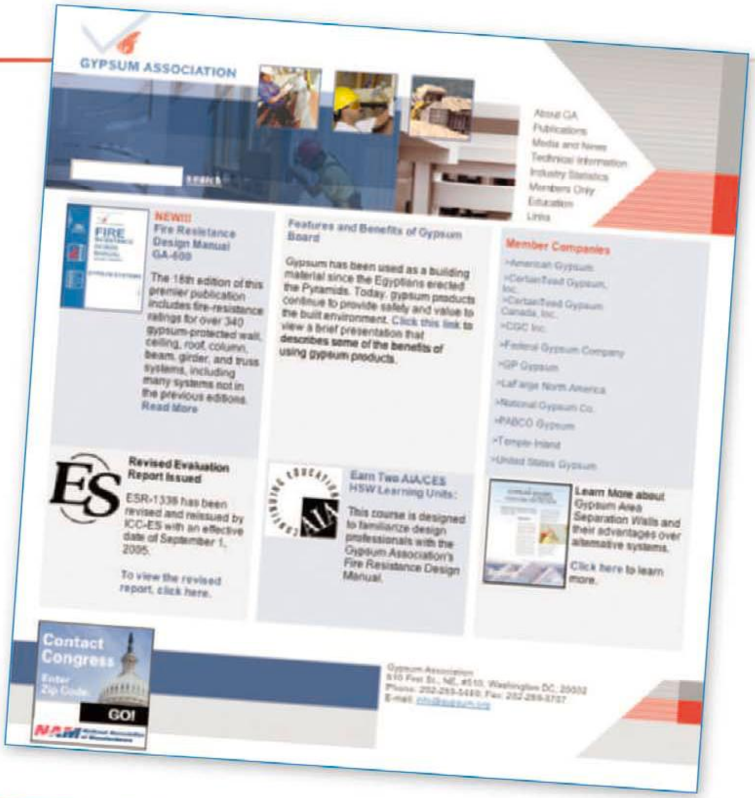
Virtually all of the materials that appear in print form are included in electronic form on a CD-ROM. Also included is a flash presentation that discusses the features and benefits of using gypsum board products, including a testimonial by an architect who specializes in school construction, in which he explains the success he has enjoyed specifying gypsum board building systems in the school market. The flash presentation is formatted so that it can easily be posted on a contractor organization's or supplier's website.

Organizations interested in receiving the press kit can do so by contacting the Gypsum Association at (202) 326-5419 or ljones@gypsum.org.

GYPSUM ASSOCIATION UPDATES WEBSITE

The Gypsum Association has recently launched its newly updated website at www.gypsum.org. The updated site sports a more streamlined look that both provides space for additional topics on the home page and simplifies the site's navigation utilities. These features allow the Association to provide more current information to visitors than before, while still presenting a fresh, easy to navigate layout. The subpages now share much of the look and the same navigation features of the home page, but offer more white space for a cleaner, easier to follow appearance than they offered in previous editions.

Though the look and navigation of the site has been revised, the information that has always been available from the Association's site is still in place. The new format will also enable the Association to update the site's information more readily and be more responsive to changes in the industry.



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Revised Evaluation Report Issued

ESR-1338 has been revised and reissued by ICC-ES with an effective date of September 1, 2005.

To view the revised report, click here.

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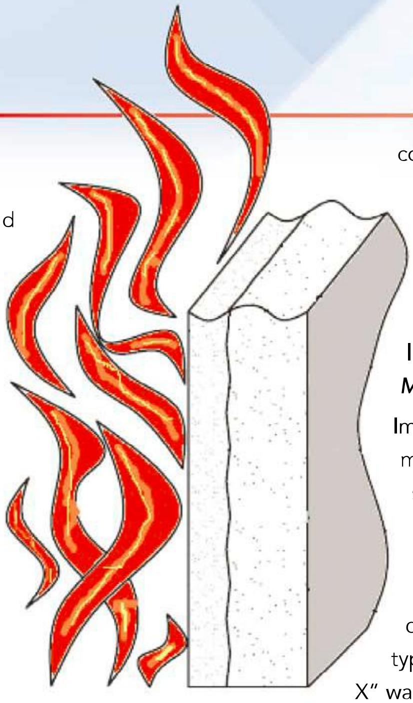
A DISTINCTION WITH A DIFFERENCE

Our technical services support people regularly receive questions asking about the difference between type X core and other gypsum board products. On that basis, it seems that a quick review of the different fire resistance categories of gypsum board is a worthy discussion.

The fire resistance of gypsum board can be described using three distinct terms: regular core, type X core, and improved type X core.



Regular Core – All gypsum is made of a noncombustible core material composed mainly of gypsum. Although it does not have the specially enhanced fire-resistive properties of type X, regular core gypsum board affords a degree of natural fire resistance. Several layers of regular core gypsum board can be used to achieve a specific fire rating. Regular core gypsum wallboard meets the product requirements contained in ASTM C 1396.

Type X Core – In the 1940s, different gypsum board formulations were investigated to increase the naturally occurring fire resistance of regular core gypsum board. A new product was eventually introduced that clearly demonstrated "eXtra" fire resistance, hence the name "type X." The basic components of type X that give it a superior fire resistance are gypsum, glass fibers, and vermiculite. These ingredients and other admixtures are combined in a carefully controlled manufacturing process to create type X gypsum board. The member companies of the Gypsum Association all voluntarily subscribe to an ongoing third-party in-plant product inspection and labeling service. They also certify to the Gypsum Association each year that their products manufactured for use in systems listed in ***GA-600, Fire Resistance Design Manual***, continue to be inspected and labeled.

Improved Type X Core – In the 1960s, further modifications were made to the original successful type X formulations of gypsum board used in some systems – particularly ceiling systems – without compromising the fire-resistive qualities. The new product demonstrated additional fire resistance over type X core, and thus the term "improved type X" was coined. It should be noted that the "improved type X" formulations are proprietary to particular manufacturers. These formulations are not generic, as is type X. The specific fire test may be referenced for information on the thickness to be used and other details of the system. Type X gypsum board should not be used in a system that requires improved type X.

Proprietary type X gypsum board is a fire-resistive gypsum board which is manufactured by the companies listed in the respective proprietary systems in the ***Fire Resistance Design Manual*** and other design guides. Based on the requirements of the specific fire test being used, proprietary type X gypsum board products may be type X or improved type X .

NEW GYPSUM ASSOCIATION MEMBER

Michael Gardner, Executive Director of the Gypsum Association, announces that Federal Gypsum Company of Point Tupper, Nova Scotia, has joined the Association as an Associate member. Action was taken on the application of Federal Gypsum Company by the Board of Directors of the Gypsum Association during its October 20, 2006, meeting.

ESSENTIALS
FROM THE GYPSUM ASSOCIATION

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Includes fire-resistance ratings for over 375 gypsum protected wall, ceiling, roof, column, beam girder, and truss systems. Over 40 system designs have been added since the previous edition, including several new floor and roof-ceiling systems and double-stud steel partition designs. Referenced by the International Building Code, Uniform Building Code, and the Building Construction and Safety Code, NFPA5000. Also referenced in major jurisdictions in the United States such as Florida, Chicago, Los Angeles, and New York City. Recognized in major jurisdictions in Canada. 158 pages.

FIRE RESISTANCE DESIGN MANUAL
GA-600-2003 17th Edition

Includes fire-resistance ratings for over 325 gypsum protected wall, ceiling, roof, column, beam, girder, and truss systems. Allows the user to quickly and easily determine essential characteristics of a wide range of fire-resistive gypsum systems classified according to use and fire resistance. STC and IIC ratings for numerous systems are included. 142 pages.

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Record News

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p.36 **Piano, SOM stir controversy**
p.38 **L.A. River plan moves forward**
p.44 **Boston City Hall's fate is uncertain**

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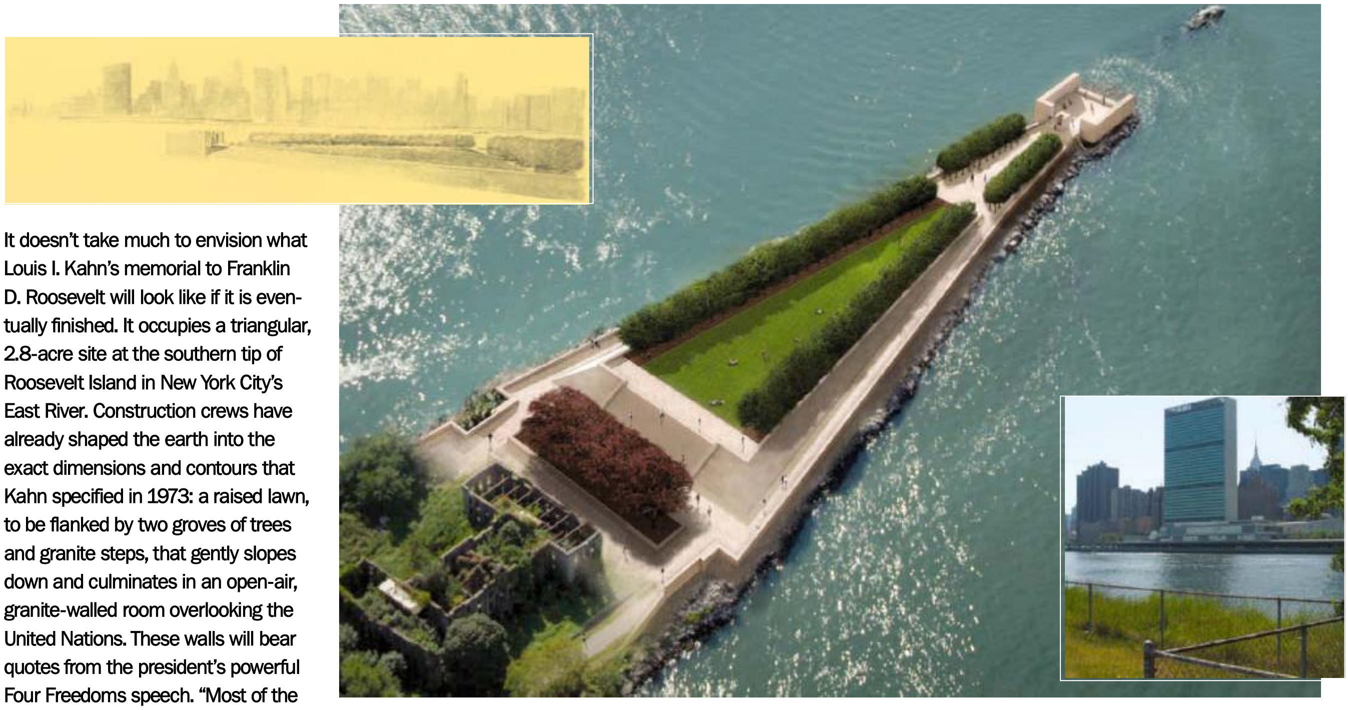
Is Louis Kahn's FDR Memorial back on track?



Louis I. Kahn designed a memorial to Franklin D. Roosevelt (top) that occupies 2.8 acres at the southern tip of Roosevelt Island in New York City's East River (above), facing the United Nations (right)—an organization the president helped create.

IMAGES: © UNIVERSITY OF PENNSYLVANIA AND THE PENNSYLVANIA HISTORICAL AND MUSEUM COMMISSION/LOUIS I. KAHN COLLECTION (LEFT); COURTESY FERI—RENDERING BY CHRISTOPHER SHELLEY, PHOTO BY AMIAGA (CENTER); JAMES MURDOCK (RIGHT)

It doesn't take much to envision what Louis I. Kahn's memorial to Franklin D. Roosevelt will look like if it is eventually finished. It occupies a triangular, 2.8-acre site at the southern tip of Roosevelt Island in New York City's East River. Construction crews have already shaped the earth into the exact dimensions and contours that Kahn specified in 1973: a raised lawn, to be flanked by two groves of trees and granite steps, that gently slopes down and culminates in an open-air, granite-walled room overlooking the United Nations. These walls will bear quotes from the president's powerful Four Freedoms speech. "Most of the memorial is already there," says Gina Pollara, executive director of the Franklin D. Roosevelt Memorial—Four Freedoms Park project of the Franklin and Eleanor Roosevelt Institute (FERI). "We only need to plant the trees and lay the granite blocks."

Easy as that sounds, there is still the challenging matter of finding money to make it happen—something that FERI has struggled with since proposing a memorial in the 1960s. But the project just received a big boost. In June, it earned a letter of support from New York's new governor, Eliot Spitzer. FERI also received an anonymous $2.5 million donation, helping jump-start fund-raising efforts on a $40 million capital campaign.

These developments are the first in a dozen years. Although Mitchell/Giurgola Architects prepared construction documents following Kahn's death in 1974, the state and city's legendary budget crisis sidelined the project. Construction finally began during the 1980s—until money problems, coupled with a change of governors, once again stalled it. Great monuments often take years to complete, but Pollara is now feeling pressure from a competing scheme pegged for the same site.

The Roosevelt Memorial occupies an overgrown area known as Southpoint, which also includes the ruined Smallpox Hospital, designed by James Renwick in 1854. It is the last substantial open space on the island—neé Blackwell's Island, then Welfare Island—which the state has redeveloped according to Philip Johnson and John Burgee's 1969 master plan. At the request of then-governor George Pataki, the Trust for Public Land began reenvisioning Southpoint in 2003. It engaged Mark K. Morrison Associates, which, with input from island residents, created a plan titled "Wild Gardens/Green Rooms." It calls for stabilizing the Renwick ruins and maintaining Southpoint's feral quality with pocket-sized forests and lawns. Absent is a Roosevelt memorial.

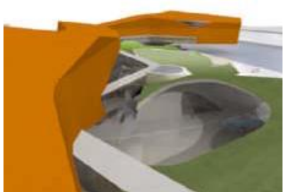
A team led by WRT Planning & Design is now preparing construction documents for the scheme's $10 million first phase, which encompasses roughly 8 acres from the Renwick ruins north. Andy Stone, director of the trust's New York program, expects to break ground by summer 2008. He says that decisions regarding the remaining portion of Southpoint will depend on fund-raising—and the Roosevelt Memorial's fate.

Although Pollara is energized by her recent successes, this optimism is tempered with pragmatism. Relying purely on state support again would be a mistake, she says. But if FERI is unable to raise a substantial chunk of money from private sources within a year, the memorial will likely remain unbuilt—which Pollara says would be a shame. "Roosevelt Island was renamed because the memorial was going to be put there. Many people today don't even know who Roosevelt was, but his definitions of freedom are more important than ever." *James Murdock*

ON THE BOARDS

Agence Search experimented with levitation in designing a Paris headquarters for the Human Sciences Institute. The 72,000-square-foot building is elevated 21 to 30 feet on stilts above a garden; escalators and an auditorium cantilever over the street. *Robert Such*

Morphosis has designed a new headquarters near Shanghai for Giant Group Pharmaceuticals. The 180,000-square-foot building's narrow form twists around, and cantilevers over, canals and a lake. Firm principal Tim Christ says that the red-metal-clad structure resembles a dragon—which is what his Chinese clients dubbed it. *Sam Lubell*



The Beijing branch of **Office for Metropolitan Architecture** has designed Singapore Scotts Tower, a 36-story, 68-unit condominium building in Singapore composed of four distinct blocks cantilevered above a central core. "Nobody wants to live on the ground floor of a skyscraper," says partner Ole Scheeren. *Andrew Yang*

For full coverage on these projects: architecturalrecord.com/news/.

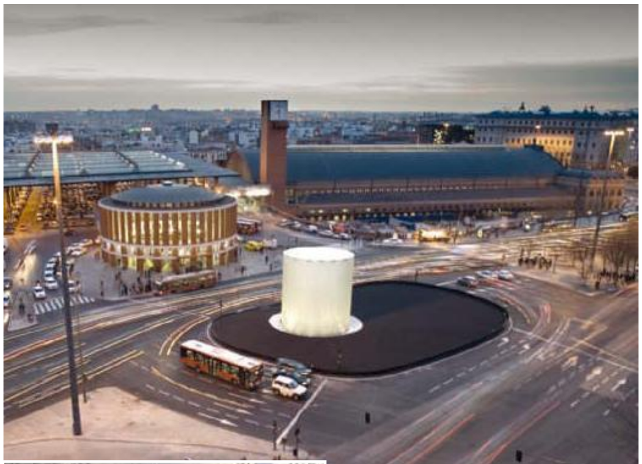
Victims of terrorist attacks memorialized

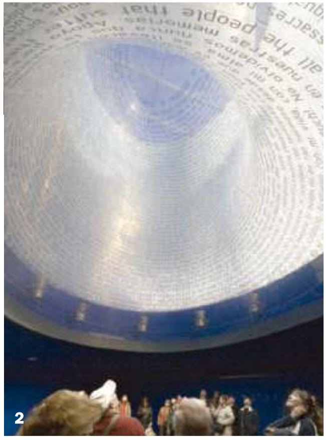
As the sixth anniversary of the terrorist attacks on September 11, 2001, approaches, memorials are rising around the country. Boston is planning a structure for Logan Airport, where the two planes that hit the Twin Towers originated. Designed by Moskow Architects, the 2-acre park containing benches and ginkgo trees is focused around a "Palace of Remembrance": a laminated glass-and-steel cube that measures 20 feet on each side. Inside the cube, which has no doors or roof, a pair of plaques will be inscribed with the names of the airplanes' passengers and crew. Different-size laminated glass pieces will dangle from cables overhead, swaying in the breeze like a mobile. It sits on a slight rise of land within sight of Logan's terminals: a stipulation of the client, the Massachusetts Port Authority. "It needed to be uplifting, to speak to the positive response to an unspeakable tragedy," explains architect Robert Linn, AIA. The $4 million project is set to break ground this September 11, with completion one year later.

Work is already progressing on the memorial at Ground Zero in Manhattan; its footings were poured in May. One-and-a-half miles north of the site, another 9/11 memorial is in the offing at St. Vincent's Hospital. During the attacks, this hospital was a command center for triage efforts. Afterward, its exterior walls became a de facto bulletin board for hundreds of missing-persons fliers. The original signs were archived, but plastic-covered facsimiles went up in their place.

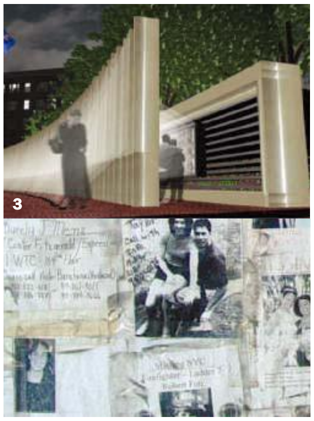
Stamberg Aferiat Architecture will recreate this flier wall as the centerpiece of a memorial on a triangular, ¼-acre strip of land across the street from the hospital. Plans call for two, 90-foot-long, stainless-steel walls, each 14 feet high, to run parallel to each other separated by an 8-foot-wide path. The fliers will hang on the rear wall; beneath them, a metal panel will be etched with their images so that when the papers eventually disintegrate they reveal permanent versions. "So many of the September 11th memorials have become so huge that they no longer have the sense of the people who were lost," says Peter Stamberg, AIA. "We wanted to keep the immediacy of the original flier-wall tribute." Despite support from the hospital's staff, the $5 million project has been hampered by slow fund-raising and uncertainty over whether or not St. Vincent's might move.

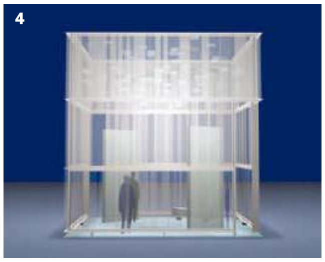
Paper and other ephemera also inspired a memorial to terrorist victims in Spain. The city of Madrid unveiled a $6 million structure dedicated to the 191 people killed in attacks on March 11, 2004. Located on a traffic island across from the Atocha train station, where four bombed trains were heading, it is defined by a 35-foot-tall tower of glass blocks coated with a polymer membrane. Painted along the tower's inside walls are messages taken from condolence cards placed at a makeshift memorial. Visitors gaze upward from a below-grade room that is painted dark blue, to contrast with the streaming sunlight from above. "A train station is not necessarily the best site for a memorial, since it's so functional," says Miguel Jaenicke, a partner of the architect Estudio F.A.M. "But in Madrid, we enjoy really good skies, so we used natural light to create a special room." *C.J. Hughes*





Studio F.A.M.'s memorial to March 11, 2004, in Madrid (1, 2). Stamberg Aferiat's 9/11 Wall of Remembrance in Manhattan (3). Moskow Architects' 9/11 Memorial in Boston (4).





IMAGES: © ESAU ACOSTA (1, 2); STAMBERG AFERIAT ARCHITECTURE (3); MOSKOW ARCHITECTS (4); (LEFT SIDE, TOP TO BOTTOM) AGENCE SEARCH; MORPHOSIS; OMA

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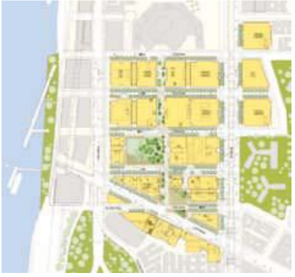
Piano, SOM's Columbia plan stirs controversy



Created by Renzo Piano and SOM, Columbia University's new 17-acre campus (top) will replace low-rise warehouses and tenements (left) with glass-walled towers (far left).

Renzo Piano is not bashful about his plan to raze century-old, masonry-clad factories and tenements in West Harlem and replace them with big, crisp buildings of steel and glass—a new campus for Columbia University that resembles the film *Metropolis* more than the existing neighborhood. "Cities are bound to change," he says, "You have to accept it."

Pressed for space at its original campus in Morningside Heights, 10 blocks south, Columbia hired Piano in 2003. He created a sprawling, city-within-a-city that covers 17 acres with 6.8 million square feet of box-shaped towers; Skidmore, Owings & Merrill formulated the urban plan. But to make way for this development, Columbia must contend with three privately owned warehouses that refuse to sell, including one that was recently added to the National Register of Historic Places. The plan to demolish them is raising the specter of eminent domain and pitting Columbia against Harlem residents.

Piano says the results will be worth the controversy. Punctuated by tree-lined quads, his buildings are meant to bring a new, open sense to the neighborhood. Their ground floors will host retail stores and restaurants. "We put the dirty functions—garbage, ramps, parking, and loading—underground, because they make a very opaque environment, and we put the research facilities up higher, so that everything on the ground is more transparent and public," he explains.

Columbia's plan took a big step forward this summer following the completion of an environmental-impact statement and feasibility study by Thornton Tomasetti and AKRF. The city's Planning Department was scheduled to start the land review process on June 18, giving the local Community Board 60 days to review Columbia's plans and suggest changes. If approved, construction would be completed in two phases: the first by 2015, the second by 2030. Meanwhile, the Community Board's own plan, called 197A—which includes more preservation and avoids eminent domain—goes before public hearings this month.

Developing a new campus almost as big as the original one requires extensive dialogue with neighborhood residents, Piano concedes. "Listening is a very tough job, because you have to listen to the right voices, and sometimes the right voices are very little voices." But residents wonder if, so far, the architect has listened only to Columbia. His plan calls for retaining only a handful of existing buildings: three small, brick structures dating to the early 1900s. They include a terra-cotta-faced building where the architect makes his local office. "We saved buildings that will give a sense of the history of this neighborhood. It's a mix of the past but, at the same time, the courage to go ahead and change," he says.

Neighborhood residents and others contend that more preservation is warranted. "How can only three or four buildings preserve the character of a neighborhood?" asks Eric Washington, author of *Manhattanville*, a history of the area. "That's a lot of responsibility for four buildings." Instead of demolishing some of the older structures, residents want Columbia to build its campus around them. "It has the opportunity to embrace such a rich community," says Anne Whitman, owner of Hudson Moving and Storage, which could be seized if the state, prodded by Columbia, invokes eminent domain.

For its part, the university contends that an influx of shopping, dining, working, and living opportunities will quiet dissent. "This is an area that is going to change, and should change in significant ways," says Columbia University president Lee Bollinger. It's a sentiment that Piano shares: "You can't embalm a city," he says. *Dorian Davis*

Cities juggle new condos with industrial base

How should a city manage residential development in a way that protects its historic manufacturing zones? Not surprisingly, perhaps, Donald Trump has exposed this planning dilemma with an opulent condominium-hotel tower designed by Handel Architects and David Rockwell, slated for a largely industrial block on the fringe of New York City's trendy SoHo neighborhood.

The conundrum is as much architectural as it is economic. Although cities nationwide are welcoming residential development to create a 24/7 environment downtown, these projects often displace small-scale industrial uses that contribute greater tax revenues. Preservationists also complain that these buildings—usually glass-walled towers—are out of character with historic urban fabric.

Planners are exploring ways to limit or refocus new residential development. Chicago Planning and Development Department design director Bennett Haller sums up the thinking: "We're trying to segregate residential uses from manufacturing uses because they tend not to live well together."

Los Angeles's planning department, for instance, is debating a cap on new housing in its industrial downtown by mandating a lower floor-area ratio. Despite successful loft conversions in L.A., a recent study shows that manufacturing zones employ nearly 1,000 people per acre. Not only is this much-needed capital, says veteran urban planner Ronald Shiffman, of the Pratt Institute, "small-scale manufacturers and people who work with their hands enliven old loft buildings."

In New York, the Trump battle turns on a common zoning rule: Hotels may rise in manufacturing zones, but permanent housing requires special approval. Andrew Berman, head of the Greenwich Village Society for Historic Preservation, contends that Trump's "hotel" will in fact furnish permanent apartments to elite buyers, so he is urging the Department of City Planning to require special review for it and other condo-hotels.

Berman also took a swipe at the design of many new residential towers—"The problem isn't the size; it's the glass," he told *Crain's* in March—but has since distanced himself from these remarks. "We judge every design on its merits," Berman told RECORD. "You never want to say, 'there's no way you could do this with this amount of glass,' because that's the work of the architect."

Some observers worry about the rush to regulate. Paul Byard, FAIA, who has written on landmark buildings, contends that public authorities wade into subjective waters when they try to protect a neighborhood's character. When it comes to solving problems like Trump's SoHo tower, he says, "neither hysterical locals nor rapacious developers but something bigger than them" is necessary. What's needed, in other words, is a process at least as democratic as *The Apprentice*. *Alec Appelbaum*

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California redevelopments move forward

Architects are vying to design San Francisco’s Transbay redevelopment (left). SOM leads a team remaking the city’s Treasure Island (below). Los Angeles is set to begin work on revamping its river (below left).

After two years on the drawing boards, the Los Angeles River Revitalization Master Plan received City Council approval in May. It calls for lowering, terracing, and greening much of the waterway’s concrete channel barriers as well as redeveloping surrounding areas into parks: a total of 239 projects along 31 miles of the 51-mile-long river. Five “opportunity zones,” which include rail yards downtown and industrial zones in the San Fernando Valley, will receive extra focus to demonstrate how the plan might encourage neighborhood redevelopment. Proposals include constructing new walking paths, a network of tree-lined connector streets, wetlands and wildlife habitat restoration, and new water-treatment facilities. The master plan could take up to 50 years to build out. It was developed by a team led by the city’s Bureau of Engineering and Tetra Tech. The City Council’s Ad Hoc River Committee, which will administer the plan, is now seeking funds from federal, state, and local sources.

Big things are also in the works for San Francisco. Next month, an architect-developer team will be selected to design the Transbay Center: a 1-million-square-foot, multimodal transit hub and adjacent skyscraper on a roughly 12-acre site within a 40-acre downtown redevelopment district. The tower could be the city’s tallest, rising from 850 to 1,200 feet, depending on the city’s final approval. Transbay’s short-listed architects are Richard Rogers Partnership; Skidmore, Owings & Merrill; and Cesar Pelli & Associates. The team of Santiago Calatrava and Boston Properties decided to withdraw from the competition in mid-May. “Their concern was being able to create an economically viable project for them as a developer,” explains competition manager Donald Stastny, FAIA.

The project is being developed by the Transbay Joint Powers Authority, which is controlled by the City and County of San Francisco, the Alameda-Contra Costa Transit District, and the Peninsula Corridor Joint Powers Board. Once a conceptual design is selected, Stastny says, design development should take two years. Construction is scheduled to begin in 2010, with completion expected by 2014.

An even bigger project is also moving forward in San Francisco: the redevelopment of Treasure Island, a former naval base. The project team includes SOM, which is preparing the master plan, SMWM, and CMG Landscape Architects, as well as developers Kenwood Investments, Wilson Meany Sullivan, and Lennar. After receiving preliminary approval from the city’s Board of Supervisors, the developers began preparing an Environmental Impact Report in June. The master plan includes a residential zone containing 6,000 housing units, a 60-story residential tower, a 235,000-square-foot retail center, and a ferry terminal that will provide service to the mainland. There will be 300 acres of open space, including wetlands, playgrounds, and an organic farm. The project’s price tag of $1.2 billion—which excludes building development costs—will be financed through private investment and $700 million in municipal bonds. The first residential units are expected to open in 2013, and the entire project could be finished by 2022. *Sam Lubell*

Poland ready for its close-up

Urban revitalization is emerging in Poland in tandem with world-class design, drawing the likes of architect Robert Krier and filmmaker David Lynch to the scene for movie-related building projects. In Lodz, a town outside of Warsaw where Lynch shot scenes for *Inland Empire* last year, the pair is in development talks for an urban renewal project whose cornerstone will be a film studio and arts center. In conjunction with locals Marek Zydowicz, director of the Camerimage Film Festival, and Andrzej Walczak, a businessman and architect, Lynch established The Arts of the World Foundation to lead the project. It plans to convert a 108,000-square-foot power station, built in 1906, into an art gallery, a postproduction editing studio, and a large hall for symphony recording sessions.

The foundation invited Krier to propose designs. The Luxembourg-based architect is also currently developing plans nearby for a 220-acre area surrounding the Lódz Fabryczna railway station, which has been designated a new city center. “The main focus will be put on cultural facilities,” says Kazimierz Suwala, who chairs the foundation’s board. “The intention is to create a new urban quarter in the center of Lodz that will become the city core, which was lacking until now.”

The preliminary scheme calls for relocating railroad tracks underground and converting the historic train station for a new use. Hotels, residential buildings, and shops are also planned, as well as a 1,000-seat theater for the Polish Film Festival. Future phases could include a museum and technology park. Construction is set to begin in 2008.

Film is inspiring development elsewhere in Poland, too. In Krakow, the Schindler Factory, a World War II–vintage structure where Steven Spielberg filmed *Schindler’s List*, will soon house Poland’s Museum of the Righteous Among the Nations. This institution pays tribute to those who risked their lives to save Jews during the Holocaust. Krakow created a $1.2 million grant for the factory’s adaptive reuse, designed by Aleksander Janicki, and the museum is slated to open in 2008.

A similar project is under way in Warsaw, also due to open next year. Finnish architect Rainer Mahlamaeki, of the Helsinki firm Lahdelma and Mahlamaeki Architects, is working on the Museum of the History of Polish Jews. The $55 million project is located in the old Jewish section of Warsaw adjacent to Natan Rappaport’s Monument to the Ghetto Heroes. It is just one outgrowth of the mayor of Warsaw’s Urban and Architectonic Council, created in 2003 to oversee downtown rejuvenation over a 10-year period. The initiative has also produced the new Warsaw Museum of Modern Art. Designed by Swiss architect Christian Kerez, the $91 million museum will open in 2010. *Dianna Dilworth*

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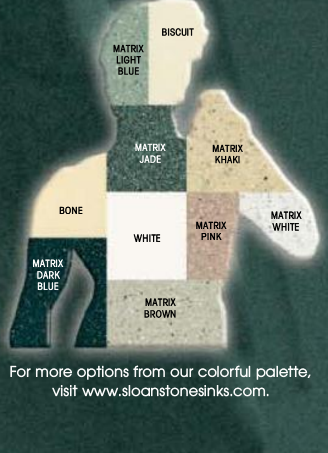
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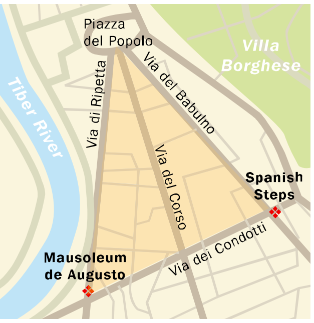
Pedestrians gain a leg up in Rome



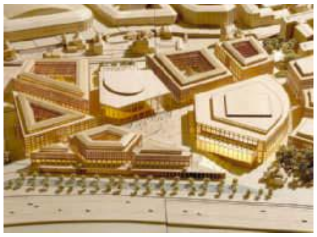
Although Rome is no longer the head of an empire, plenty of roads still lead to it. Many of its streets are now getting swept up in a radical redesign of the city's urban fabric. As cars and scooters are slowly exorcised from the city's center, tire-friendly asphalt is replacing the historic *sanpietrini*, or cobblestones, on major traffic arteries. The old *sanpietrini* will be used to resurface streets and piazzas that will be handed over to pedestrians at the project's end.

Mayor Walter Veltroni outlined the "restyling" plan at a press event earlier this year. Areas throughout the city center—most notably the roughly ¼-square-mile triangle-shaped area bounded by Via di Ripetta, Via del Babuino, and Via dei Condotti—are slated to go pedestrian-only. Once all the new pieces are in place, visitors will be able to access the cobblestone streets by foot, bicycle, bus, or taxi. Those who choose to drive will be required to leave their vehicles in a newly created 700-spot parking lot by the Pincio Hill, which began construction in June.

To support this massive *pedonalizzazione*, or pedestrianization, some streets will be designated for various forms of public transportation. This summer, for instance, the busy Via Nazionale is becoming a smooth ride, with buses relegated to its middle lanes and other traffic flanking them to either side. Other changes are also afoot. This spring, the city began installing 36 new *nasoni*, Rome's ubiquitous large-nosed drinking fountains, whose design dates to 1874. It is also rebuilding the minute sidewalks along many asphalted streets—this time wide enough to be walked upon.

In a city built on layers of competing histories, change can be a complex, contradictory process. For some, modernizing Rome's roads involves removing a crucial part of history and an integral part of the city's chaotic livability. But for many others, *pedonalizzazione* represents a dream come true. Tourists, architectural historians, and locals craving a good long look at Rome's legendary architecture will finally be able to study it without that speeding Vespa in the back of their minds. It took more than a day to build Rome—several centuries, in fact—but *pedonalizzazione* is expected to be complete by December 2009 at a cost of $267 million. *Susan H. Gordon*

Foster's Kremlin project draws criticism



The Foster + Partners designed Zaryadye project, a $1.5 billion mixed-use complex on a 13-acre site near the Kremlin in Moscow, was mired in legal proceedings, but its scheduled September ground breaking now seems back on track. A Russian court had annulled the results of a competition that selected developer ST, but in May courts upheld the validity of ST's contract with the city. Critics, meanwhile, complain that Foster's design is derivative. *Paul Abelsky*

News Briefs

The 2007 European Union Prize for Contemporary Architecture Mies van der Rohe Award went to Mansilla + Tuñón, a Spanish firm led by Luis M. Mansilla and Emilio Tuñón, for its Contemporary Art Museum of Castilla y León (right), in León, Spain. Bevk Perovic Arhitekti, a Slovenian firm led by Matija Bevk and Vasa J. Perovic, received special mention as an emerging architect for its Department of Mathematics building at the University of Ljubljana in Slovenia. *J.M.*

The American Academy in Rome has conferred its 111th annual Rome Prizes. Frederick Fisher, of Frederick Fisher and Partners, and Daniel Mihalko and Annie Han, of Lead Pencil Studio, won in the architecture category. John Cary, of Public Architecture, and Molissa Fenley, of Molissa Fenley and Dancers, won in the design category. Jana Dambrogio, of the National Archives and Records Administration, and John Ochsendorf, of the Massachusetts Institute of Technology, won in the historic preservation and conservation category. Alan Berger, of Harvard University, and Lisa Tziona Switkin, of Field Operations, won in the landscape architecture category. *J.M.*

The Cooper-Hewitt Museum has named its 2007 National Design Awards winners. They include Antoine Predock, who received a Lifetime Achievement Award (his American Heritage Center and Art Museum, in Laramie, Wyoming, is shown, left); Denise Scott Brown and Robert Venturi, who were given the Design Mind Award; Office dA, which won the Architecture Design Award; Lewis.Tsurumaki.Lewis, which won for Interior Design; and Peter Walker and Partners, which won for Landscape Design. *J.M.*

The 2007 Kenneth F. Brown Architecture Design Award, which recognizes architects and their works in the Asia-Pacific region, went to two projects. Anna Heringer and Eike Roswag, of the Austrian atelier Heringer-Roswag Cooperation, won for their School—Handmade in Bangladesh, located in Gona Aloy, Bangladesh. The Japanese firm Atsushi Kitagawara Architects won for its Gifu Academy of Forest Science and Culture, in Mino City, Japan. *J.M.*

Alberto Kalach's Biblioteca José Vasconcelos was hailed as a cultural gem for Mexico City—and, at 500,000 square feet, the largest public library complex in Latin America—when it opened in May 2006. But less than one year later, the $100 million complex was forced to close in March when its unfinished water system began leaking, causing damage to elevators, marble floors, and walls. Repairs are due to be finished this month, but critics accuse former Mexican president Vicente Fox's administration of rushing construction so that the library would open before a hotly contested election last summer. *Ronda Kaysen*

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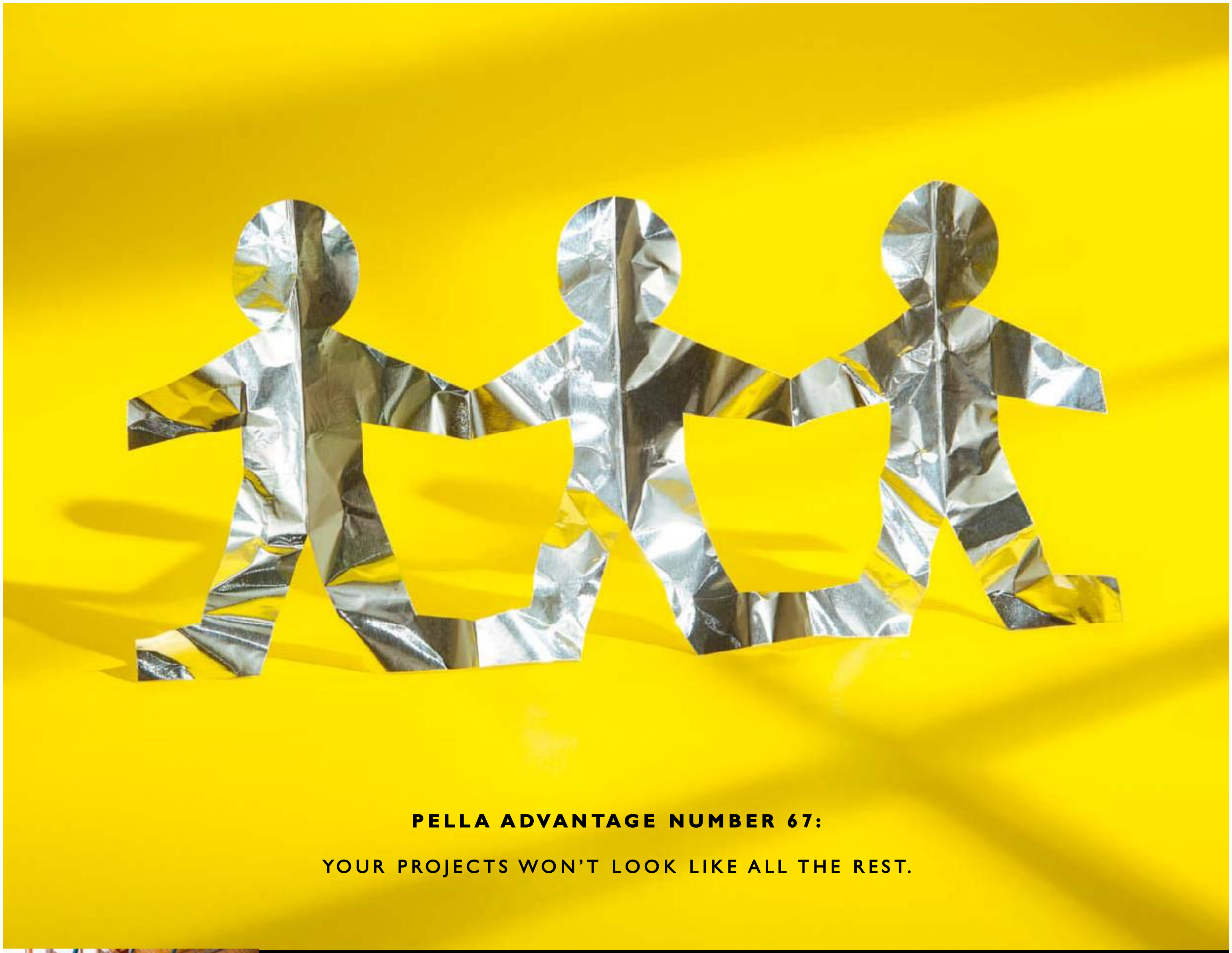
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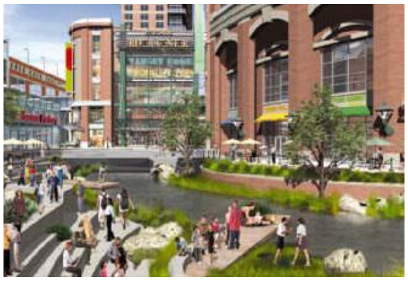
On the waterfront—in Yonkers

Cleaner than it's been in decades, the Hudson River is a cynosure for residential developers, who value the profitable potential of its scenic vistas. The shores of Lower Manhattan were first to sprout high-rise condos, followed by Jersey City across the river. Now, 15 miles to the north, the former industrial powerhouse of Yonkers is transforming its disused Hudson waterfront and reclaiming another, much neglected waterway.



Following the model of Providence, Rhode Island, which uncovered its own river in the 1990s, Yonkers is unearthing and cleaning up three segments of the Saw Mill River, which has coursed largely unseen through subterranean pipes and culverts under the city's center since the 1920s. Outdoor cafés and landscaped promenades will eventually line its banks. The first two segments, totaling ⅕ mile, will be completed in 2010.

The reborn Saw Mill forms the heart of a $1.8 billion project called River Park Center. Stuever Fidelco Cappelli, a partnership of local developers, is clearing 18 acres comprising eight blocks surrounding Getty Square, Yonkers's historic center. More than 4 million square feet of condominiums, apartments, shops, a hotel, offices, parks, and a baseball stadium will start rising at the site in September. The designers include Ehrenkrantz Eckstut & Kuhn Architects, Clarke Caton Hintz, and Design Development.

River Park's 6,500-seat stadium rests atop commercial space—home plate will be situated 100 feet above ground level—with two residential towers flanking it, providing residents with a bird's-eye view of the action. "We wanted to stack all these different parts on top of each other to create synergy," explains Mark Schulman, a principal of Design Development.

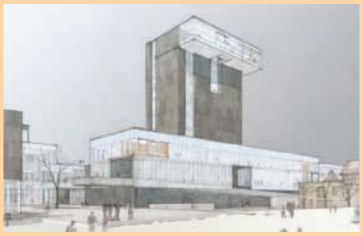
Other large-scale residential projects are already under way. They include Hudson Park North, which broke ground last winter on the site of a former lumberyard. The $125 million development is composed of two connected towers containing 294 apartments, and an esplanade that connects to a newly refurbished pier on the Hudson.

Do H. Chung and SCLE Architects designed Hudson Park's residential portion: two towers, 12 and 14 stories, respectively, that bookend a row of lower-rise units. It's a massive and dense project for the neighborhood—but some believe the city is due for a new look. "We are creating a new vernacular here because Yonkers was torn to shreds in the past 50 years," says Arthur Collins, a principal of the project's developer, Collins Enterprises.

Other designs are testing the city's appetite for novelty. This much became clear at a public hearing in March, when British architect Wil Alsop unveiled his proposal to stack 400 apartments on top of a disused power plant on the Hudson. The scheme would require replacing a pair of brick smokestacks with a multicolored glass, 25-story tower perched on tentaclelike stilts. Neighbors objected that it is too tall.

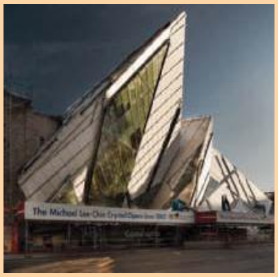
Alsop defended his design by saying that the plant "will fall down if nobody does anything about it." A side benefit, he added, will be that the scheme's esplanade and café could help reconnect residents to the Hudson—and, in the end, "life comes down to eating, drinking, and feeling relaxed." *C.J. Hughes*

News Briefs



Tod Williams Billie Tsien Architects won the competition to design a $100 million arts center for the University of Chicago. Although the building's exact size is yet to be determined, its design features five interlocking boxes, clad in glass and stone, and a six-story tower with a partially retractable roof that allows views of Chicago's skyline. The other finalists were Fumihiko Maki and Associates, Hans Hollein, Morphosis, and Studio Daniel Libeskind. *Violet Law*

Standard 189P has been released for public comment, which will be accepted until July 9 at www.ashrae.org/publicreviews. Officially called the "Standard for the Design of High-Performance Green Buildings Except Low-Rise Residential Buildings," it will provide a baseline for sustainable design, construction, and operations—and ultimately could be incorporated into building codes. Addressing both new commercial buildings and major renovations, it encompasses energy and water efficiency, greenhouse gas emissions, sustainable site selection, and materials. The American Society of Heating Refrigerating and Air-Conditioning Engineers, the Illuminating Engineering Society of North America, and the U.S. Green Building Council developed it. Standard 189P is expected to be complete by the end of 2007. The Green Building Initiative, meanwhile, expects to release for public comment a standard with similar goals in the fall. *J.M.*



Studio Daniel Libeskind's Michael Lee-Chin Crystal, a 175,000-square-foot expansion of Royal Ontario Museum (ROM), opened June 2 in Toronto. It shares the aesthetic of angular, crystalline forms with Libeskind's Hamilton wing at the Denver Art Museum. But as ROM museum director William Thorsell notes, "the cladding, the finishes, the nature of the interior spaces are all quite different." *Alex Bozikovic*

Giorgio Cavaglieri, an Italian-born architect who helped jump-start New York City's preservation movement, died on May 15 at the age of 95. His projects included the restoration of the Jefferson Market Library, in Greenwich Village, and converting the old Astor Library into the Public Theater. As president of the Municipal Arts Society during the 1960s, he fought to spare Grand Central Terminal from significant alterations. *J.M.*

Sir Colin St John Wilson, the British architect, educator, and arts patron, died on May 14, at the age of 85. Known as "Sandy" to his friends and colleagues, he had taught at both Yale and MIT, and served as director of the Cambridge School of Architecture. Wilson's enduring built achievement is the British Library. Completed in 1997, this controversial but now celebrated landmark adjacent to St. Pancras Station, in London, occupied several decades of his career. It combines monumental scale with attention to detail. *Peter MacKeith*

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Boston's mayor revives plans for new city hall

While officials in Boston push ahead with plans for a new city hall, advocates are stepping up efforts to save the existing structure. The Boston Landmarks Commission agreed this spring to review a petition seeking protections for the building's exterior and main lobby. Supporters view the case as a local and national bellwether for preserving Modernist architecture, which increasingly finds itself in developers' crosshairs.

Kallmann McKinnell and Knowles's Boston City Hall has been controversial since its completion in 1968. Many architecture critics praise its Brutalist aesthetic—with characteristic features including exposed concrete, bold forms, and monumentality—and its Classical references. But detractors, including Mayor Thomas Menino, cite the building's massive scale, labyrinthine interiors, and vast windswept plaza as unwelcoming and inefficient.

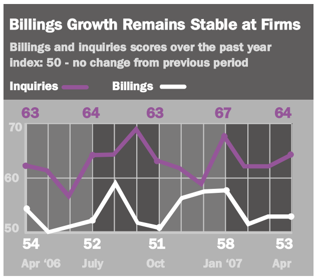
Menino has revived a 1998 scheme to sell the downtown site for private development and then construct a new city hall and civic center several miles southeast in the South Boston seaport district. The city is still studying this new site and reviewing its space requirements, according to a spokesperson. But a number of city councilors, including the council president, oppose the plan and contend that such a move would push municipal offices to a peripheral location that lacks adequate infrastructure.

A timetable has yet to be set for a Landmarks Commission hearing. Preservationists worry that the process can be slow—and that the mayor holds a veto. Failing designation as a local landmark, the city hall might qualify for National Historic Landmark status or the National Register of Historic Places. While neither would prevent the building's destruction, says preservation advocate Gary Wolf, AIA, "both have certain types of protection and would make it challenging from a PR standpoint to tear down."

Even if Boston decides to construct a new building, admirers of the existing City Hall hope that it will be put to other uses. For their part, municipal officials stress that Menino has not called for its demolition. *Ted Smalley Bowen*

ABI chugs along, but inquiries show strength

This April's Architectural Billings Index, prepared by the American Institute of Architects, held steady for the third month in a row with a score of 52.7; any showing above 50 indicates growth. But many of the mostly commercial firms surveyed said that inquiries for new business are rising, suggesting that billings might increase later this year. *J.M.*



News Briefs

Eero Saarinen's Gateway Arch, in St. Louis, is the subject of a documentary film airing on public television stations nationwide this summer. *The Gateway Arch: A Reflection of America* follows the monument from the time it was proposed in 1933 to its completion in 1965—and Saarinen's groundbreaking use of orthotropic design to create the structure. "Had they had money to start building in the 1940s, they wouldn't have been able to because the technology didn't exist for another decade," says the film's codirector Bob Miano, of Civil Pictures. *J.M.*

The World Monuments Fund unveiled its 2008 World Monuments Watch List of 100 Most Endangered Sites in June. This year's list highlights buildings and other heritage sites that are threatened by political conflict, unchecked development, and for the first time, climate change. Two places, much in the headlines, appeared for different reasons: New Orleans was cited for the ongoing risk that climate change presents to its future, and Iraq was cited for the continuing conflict that threatens to damage cultural sites. The fund also singled out Modernist buildings worldwide, including Louis I. Kahn's Salk Institute, that are vulnerable to encroaching development. For the list's complete text, visit architecturalrecord.com. *J.M.*

The National Trust for Historic Preservation released its 2007 list of America's 11 Most Endangered Places. Since initiating this list in 1988, the trust has successfully helped save 52 percent of these sites from destruction. On this year's list are: Brooklyn's industrial waterfront in New York; El Camino Real National Historic Trail, in New Mexico; the H.H. Richardson House, in Brookline, Massachusetts; Hialeah Park, in Hialeah, Florida; historic places in power line corridors in seven Mid-Atlantic states; historic structures in Missouri's Mark Twain National Forest; motels along Historic Route 66; the Minidoka Internment National Monument, in Jerome County, Idaho; the Philip Simmons Workshop and Home, in Charleston, South Carolina; Pinon Canyon, Colorado; and Stewart's Point Rancheria, in Sonoma County, California. Visit architecturalrecord.com for descriptions of each place. *J.M.*

ENDNOTES

Silverstein Properties and the Port Authority of N.Y. and N.J. reached a settlement with seven insurers to receive the remaining $2 billion in claims on the World Trade Center. The May 23 agreement ended six years of legal battles and removed the last major obstacle to rebuilding at Ground Zero.

● The Frank Gehry–designed Atlantic Yards project scored a significant victory on June 6 when a federal judge dismissed a lawsuit against developer Forest City Ratner, which is seeking the use of eminent domain to seize a dozen properties at the Brooklyn site where it plans to build the $4 billion mixed-use complex. Plaintiffs say they will appeal this decision.

● Autodesk has signed a $25 million agreement to acquire NavisWorks, which produces a universal file reader for 3D coordination, collaboration, and construction sequencing. The sale will be complete by August.

● Hill Glazier Architects, a 40-person boutique firm specializing in hospitality design, has merged with HKS Architects, an architecture and engineering giant with offices in 18 cities worldwide. The HKS Hill Glazier Studio will remain in Palo Alto, California, as part of HKS's Hospitality Group.

● REID architecture and 3D Architects are merging their practices to create one of the 10-largest design firms in the United Kingdom. The combined company will have 320 employees. *J.M.*

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For and about the emerging architect

archrecord2

It's always gratifying for us at archrecord2 to find innovative design turning up in surprising places and being formed from unexpected materials. This month, archrecord2 catches up with De Leon + Primmer, a firm adding to the evolving built environment of Louisville. We also reveal a winning competition for a listening room constructed of cardboard. Go to our Web site to meet other talented young designers in Design, Work, and Live, and join the conversation in Talk. ONLINE: *To join the conversation in Talk and respond to our featured question this month, "Are intern salaries fair?," visit the "Emerging Architect Issues" area of* **construction.com/community/forums.aspx**.

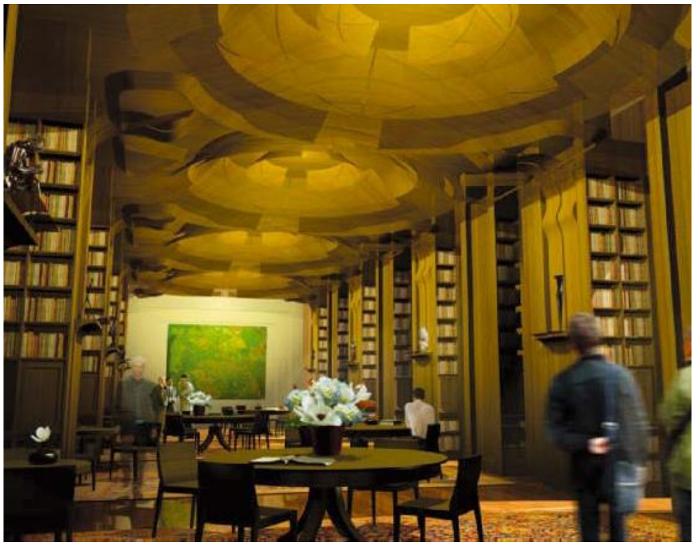
Design

De Leon + Primmer Architecture

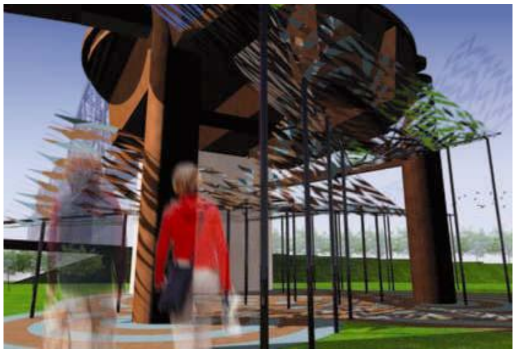
A flurry of recent commissions validated the decision of the principals of Kentucky firm De Leon + Primmer Architecture to return to Louisville after relocating to Charlotte, in nearby North Carolina. Often referred to as a "boomerang town," a place from which people leave, then feel compelled to return, Louisville proved to have the right combination of open-mindedness with a somewhat undefined identity, which the principals believe gives them opportunity to develop new ideas. After trying Las Vegas out, where they ran the design office for a large engineering firm, and then Charlotte, "friends and clients kept calling us back to Louisville," says principal L. Ross Primmer.

For Primmer and Roberto de Leon, selecting an accessible and emerging market was an essential decision in their careers. While most of their fellow students at Harvard Graduate School of Design were planning to stay in Boston or move to New York after graduation, Primmer researched emerging markets—"smaller cities that were transitioning from industrial to service-based economies," he says. He believed such a market would allow them greater access to the kinds of projects that interested them. "We wanted to work in a community where we could have an impact."

After working for Bravura, a well-regarded midsize regional firm, Primmer and de Leon decided to open an office together. "We were each other's best critic," Primmer says. They quickly developed a reputation for working well with nonprofits and arts groups, figuring out ways to get the most out of limited budgets and commonplace materials. "There are not a lot of high-end retail spaces or sleek bars in this market," de Leon says, "so we have to find other kinds of clients, and we ended up with the kind we really wanted." After returning to the city, the firm recently completed a multipurpose building for Yew Dell Gardens, a nonprofit horticultural education center outside Louisville. They renovated a mid-20th-century kit barn from Sears Roebuck, and added a contempo-

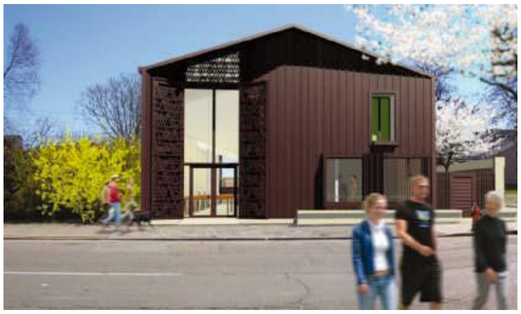


Center for Interfaith Relations, Louisville, unbuilt
Renovation and addition of a multiuse urban resource for the study of all faiths includes 9,500 square feet of renovation and new construction.

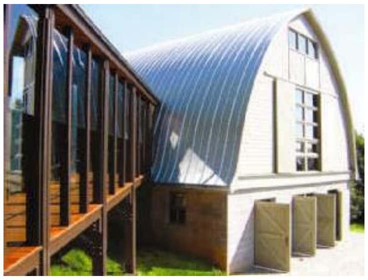


Big Four Bridge Pavilion, Louisville, unbuilt
This 5,500-square-foot public venue/civic gateway is a schematic design for the final construction phase of the Louisville Waterfront Park.

IMAGES: COURTESY DE LEON + PRIMMER



Shelby Street, Louisville, 2007
A new live/work building within an area of rapid urban renewal responds to a diverse context of historic shotgun houses, early-19th-century brick storefronts, and metal warehouses.



Yew Dell Gardens, Crestwood, Kentucky, 2006
This 4,800-square-foot renovation and addition is the first component of a multiphase program to facilitate the public use of an arboretum and gardens founded in 1940.

rary addition using traditional tobacco barn builders. Emphasizing the need for collaboration and consensus building, Primmer underscores the importance of learning to work with nonprofit boards of directors. "You have to be an advocate for the cause as well as a steadying presence, because many boards have a quick turnover," he says.

Current projects include a master plan for Yew Dell, a pavilion at Louisville's Waterfront Park; the design of a new park overlooking the Ohio River in the southwestern section of the city; as well as residential projects and a new live/work building that will house their office, a workshop, and apartments. The live/work building draws on the warehouses, 19th-century brick commercial buildings, and shotgun houses that surround the site.

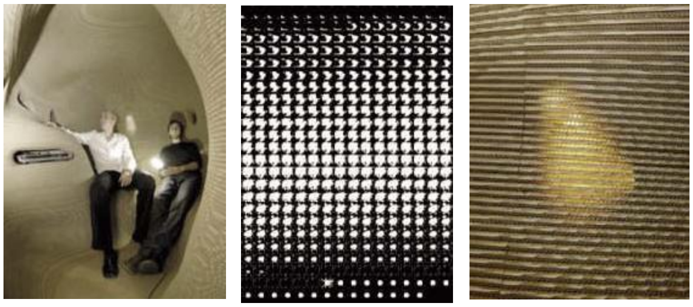
Though they recently hired three interns, two recent graduates from the University of North Carolina at Charlotte and one from the University of Kentucky, de Leon and Primmer plan to maintain a small office, with a maximum of 10 people. "We want the office to continue to be very hands-on," de Leon says. "We always want to maintain a sense of intimacy with the work, to maintain the rigor." *Alan G. Brake*

For additional photos and projects by De Leon + Primmer, go to **architecturalrecord.com/archrecord2/**.

Work

Mafoombey explores the acoustics of cardboard

Martti Kalliala and Esa Ruskeepää were college roommates while attending the architecture school at Helsinki University of Technology in Finland. The two students began to experiment with cut corrugated cardboard when they entered the open-to-all Habitare design contest at the University of Art and Design in Helsinki in 2005. The competition asked for a small space for listening to and experiencing music within the set dimensions of 2.5 cubic meters (88 cubic feet). Thus was born Mafoombey, a space for music.



Esa Ruskeepää and Martti Kalliala (above left) in their Mafoombey project. The corrugated-cardboard listening room is composed of 720 hand-cut pieces of cardboard.

Kalliala and Ruskeepää chose to work with cardboard for its aesthetics, acoustics, low cost, and mass-production capabilities, after turning away from other materials such as recycled carpets. "We decided to use the whole volume and make a free-form space within it," said Ruskeepää. "We also wanted to use a cheap material that could be stacked to make a huge pile."

The structure consists of 720 hand-cut pieces of cardboard sliced horizontally, then stacked on top of each other with no adhesive. It was designed with the help of architect friend Martin Lukasczyk, using 3D modeling and scale models. The space includes a sitting area for two to three people and a DVD player to play music. Energy-saving lights and surround-sound speakers are built into the 360-layered structure, with one central wire leading out to plug in for electricity.

The cardboard was donated to the students from Finnish paper manufacturer Stora Enso, in whose factory the students cut the pieces with a controlled knife cutter one-by-one. The design won the competition and was built, becoming the first built project for the 26-year-old architects.

Mafoombey has garnered the emerging architects international acclaim. The project was highly commended at the Architectural Review Awards for Emerging Architecture in the U.K. in 2006 and was the fourth-place nominee in 2005 for the Nordic competition, the Forum AID Prize, issued by *Forum AID* magazine in Sweden, placing alongside actual buildings such as Zaha Hadid Architects's Ordrupgaard Museum extension in Gentofte, Denmark.

So far, only one version of Mafoombey has been built, but collectors from Sweden to Japan have expressed interest in purchasing Mafoombeys of their own. The young architects also have plans to apply the corrugated-cardboard material to build furniture or for use as an acoustic insulating in lecture halls.

The three have been busy building their international resumes. All of them worked at Finnish firm Pekka Salminen in 2005 (where Lukasczyk still works). Kalliala worked at Atelier Peter Zumthor Architects, in Switzerland, and with OMA in the Netherlands for a year before returning to Helsinki to finish his degree. Ruskeepää spent time in the New York office of OMA for a semester before returning to Finland. Both students will graduate this fall. After graduating, Kalliala and Ruskeepää plan to design more projects together, enter more competitions, and see where the future of cardboard lies.

"Maybe one day we will establish a real firm," says Ruskeepää, "but right now, it is important for us to work in really good firms and get a lot of international experience. If we have a firm, we want it to be as international as possible." *Dianna Dilworth*

IMAGES: COURTESY DE LEON + PRIMMER (TOP TWO); MAFOOMBEY (BOTTOM THREE)

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Calling a truce in the style wars over government buildings

Critique

By Robert Campbell, FAIA

UNITED STATES COURTHOUSE

Thom Mayne's courthouse in Eugene, Oregon, came through the Design Excellence program.

PHOTOGRAPHY: © TIM GRIFFITH

"The development of an official style must be avoided. Design must flow from the architectural profession to the Government, and not vice versa."

The words are those of Daniel Patrick Moynihan. They're part of his famous *Guiding Principles for Federal Architecture* (1962), which helped inspire a revolution in government architecture. The revolution was the Design Excellence Program in the General Services Administration (GSA—sorry, it's hard to write about government without bogging in multisyllables). From 1994 to 2005, under the GSA's chief architect, Ed Feiner, the program tried to choose the best architects in the country for the design of courthouses and other federal buildings.

Full disclosure: I've been a so-called "peer adviser" to the Design Excellence Program since its inception, one of dozens of people around the country who are occasionally asked to help the GSA select an architect or to review an evolving design.

But getting back to Moynihan's dictum: I once heard Feiner phrase it another way. "We don't decide what is good design," he said. "We ask the architects to tell us."

But that begs an obvious question. Which architects do you ask? It's a conundrum. By asking some architects and not asking others, is the GSA deciding, de facto, what good design is?

That conundrum was the heart of a national conference in Washington, D.C., in June. Entitled "Function, Form, and Meaning in Federal Courthouses," it was held, ironically, in the pompous, disorienting interior wasteland that is the Ronald Reagan Building (not a product of the Design Excellence Program).

The conference was supposed to look back over the 13 years of Design Excellence, using courthouses as a building type case study, and figure out what worked and what didn't.

Disclosure again: I was the keynote speaker at this conference. I'm not about to repeat my remarks (I tried to argue every side of every issue, just to throw everything on the table). Instead, I'd like to address the real question about this conference: Why was it held?

A hidden cabal?

It was held, I think, in an effort to clear the air of a persistent rumor. Many people suspect there is a hidden cabal that's been trying to bully the GSA into abandoning contemporary architecture in favor of "traditional" or "Classical" buildings, perhaps fully decked out with theatrical domes, pediments, and Grecian colonnades.

Rumors like that get around for a reason. To understand them, you have to go back to a series of events that began with the resignation of chief architect Feiner more than two years ago.

Before Feiner, before Design Excellence, the best architects seldom applied for GSA work. It was assumed the GSA wasn't interested in architectural innovation or excellence. Since World War II, most government buildings had been bland, generic, unimaginative. All buildings are billboards for the values that created them, and these shouted "bureaucracy." That bad period, it's worth noting, was an exception in American architectural history. From the one-room brick courthouses of Colonial days through the so-called WPA Style of the 1930s, with its masterful Art-Deco and Stripped Classical post offices, American government buildings before World War II were usually a source of architectural pride.

For almost two years after Feiner resigned, the government failed to appoint a new chief architect. It was widely assumed that the GSA was deliberately letting Design Excellence die. But why? Was there pressure from conservative judges? From some senator or committee? From old-line architecture firms? From the White House? Nobody claimed to know.

Then, at last, came the news that Thomas Gordon Smith, a professor at Notre Dame, would be the new chief architect. Whether Smith was actually appointed (as I believe he was), or whether the announcement was merely a Washington trial balloon, there was flak from the architectural community. Soon it was announced that, no, Smith would be merely a consultant to the program. The new chief architect would be Les Shepherd, a Modernist who had long served as Ed Feiner's second-in-command.

Contributing editor Robert Campbell, FAIA, is the architecture critic of The Boston Globe.

Thomas Gordon Smith would have been an astonishing choice as chief architect. He came to Notre Dame as chairman of architecture in 1989, where he created the only major school in this country that teaches traditional Classical architecture. Presumably, he would have led the GSA toward that same goal.

Anyone who, like me, writes about architecture for the general public knows that most people love traditional architecture and prefer it to contemporary. Everyone in my home city of Boston seems to know that in a 1976 Bicentennial poll of architects and historians, the Modernist Boston City Hall was named the seventh-greatest work of architecture in American history. Boston City Hall is so widely disliked (except by us architects) that the current mayor wants to tear it down and start over.

An architectural language

I find it increasingly hard to get very excited about these style battles, and I suspect a lot of people feel the same way. Thomas Gordon Smith spoke at the conference, and he sounded entirely sane. (As one nationally known architect said to me on the way out of the hall, "The dragon turns out not to be such a dragon.") He presented Classicism as an architectural language of well-understood conventions, a language that can and should be used inventively. I've visited his school and liked the student work.

I suppose you could make the analogy with English, another language of conventions in which it is, nevertheless, possible to write original poetry. If you stretch the English language, or the language of architecture, too far too fast, what you get is an uncomprehending public. As Charles Moore put it, avant-garde architecture can be like Esperanto—an invented language understood only by a small international claque of appreciators.

In my talk at the Washington conference, I showed images of some of the recent courthouses the GSA has built. And, in fact, they come in many styles, some of them pretty conservative, including a couple of deep bows to neo-Georgian or Southwest adobe. The latter were obeying another of Daniel Patrick Moynihan's behests: "Specific attention should be paid to the possibilities of incorporating … qualities which reflect the regional architectural traditions of that part of the Nation in which buildings are located." Of all the GSA courthouses, only Thom Mayne's in Eugene, Oregon, is anything you could call far-out. And one of the Eugene judges spoke to us, too. He was in love with his building.

Richard Meier's Phoenix courthouse is another Design Excellence project.

PHOTOGRAPHY: © SCOTT FRANCES/ESTO

I ended the day feeling less than inflamed by the taste war. Do we really have to make a religion out of any one approach?

Modernism in architecture was clearly a religion, in the sense that it was based on an a priori belief system rather than on pragmatic experiment. The world is full of systems like that. Freudian psychoanalysis and astrology come to mind: both systems of belief, like Modernism, in which a single internally coherent system is assumed to govern more or less everything. The more strident aspects of today's New Urbanism, with its ideology of the so-called "Transect," can sound a lot like another such belief system. So can Classicism. Or Pugin's Gothic.

For me, a keystone experience was that of living as a student for three years in a building called Lowell House at Harvard. Lowell House is exactly what Modernists rebelled against: a sort of oversize, underdetailed, cupola-topped version of a British redbrick Georgian country house, a stage set for the lives of students (all male, of course) who were regarded as the cultural descendants of the robed undergraduates of Oxford and Cambridge.

Harvard president A. Lawrence Lowell, for whom the building was named, was a bigot who established a Jewish quota at Harvard and, as chair of a blue-ribbon panel, sent the Italian immigrants Sacco and Vanzetti to their needless deaths. You can read Lowell House as the architectural embodiment of his Anglophile bias. Buildings are always message bearers. But I've never been able to persuade myself that life would have been better if Walter Gropius had arrived at Harvard 10 years before he did and had insisted that Lowell House be designed in the International Style. Lowell was, and is, a delightful, functional, and beautiful place to live.

An architectural agnostic

There is room in America for different kinds of architecture. Any one of them can be done well or badly. We don't have to make a fetish of either the past or the future. In any architectural language, old or new, you can be inventive and functional on the one hand, or form-frozen and dysfunctional on the other. Of course, you have to reinvent your language, just as Palladio, faced with new programs and sites, reinvented the language of the Romans he idolized. Or as did Jefferson, when he branded the Pantheon on the University of Virginia. Or Corbu, when his memory of whitewashed shapes on the Greek islands led him to Ronchamp.

I've turned into an architectural agnostic. I don't believe in any set of principles. Or better, I believe in everything. We're never going to have another dominant style. There ain't gonna be no common language. The information revolution makes too many options available to everyone. Architects and clients should be able to use any architectural style they like, as long as it's fresh and fitting and solves the real problems.

You do have to wonder, though, exactly what will be the role of Smith, now the one and only "GSA Architecture Fellow." I guess we'll find out. Is he indeed the product of some conservative political move behind the scenes? Should there be, perhaps, an equal-and-opposite adviser with a different point of view?

I'll end as I began. Another of Moynihan's Guiding Principles says this of federal architecture: that it must be done "in an architectural style and form which is distinguished and which will reflect the dignity, enterprise, vigor and stability of the American Government."

Four nouns chosen as a poet might choose: You can't say it any better. ■

ONLINE Should Thomas Gordon Smith have been appointed chief architect of the GSA? Respond at ***architectural record.com/community/critique***.

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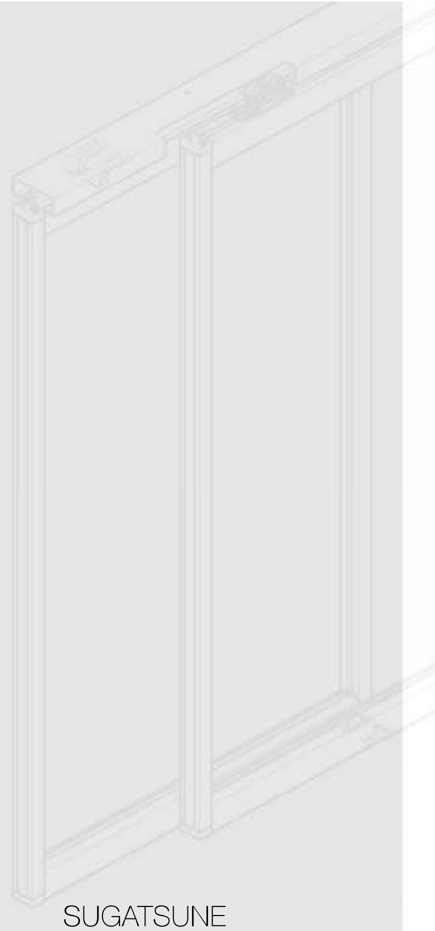

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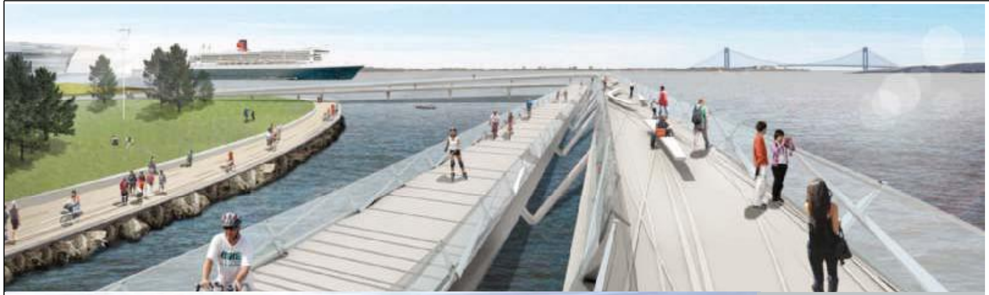
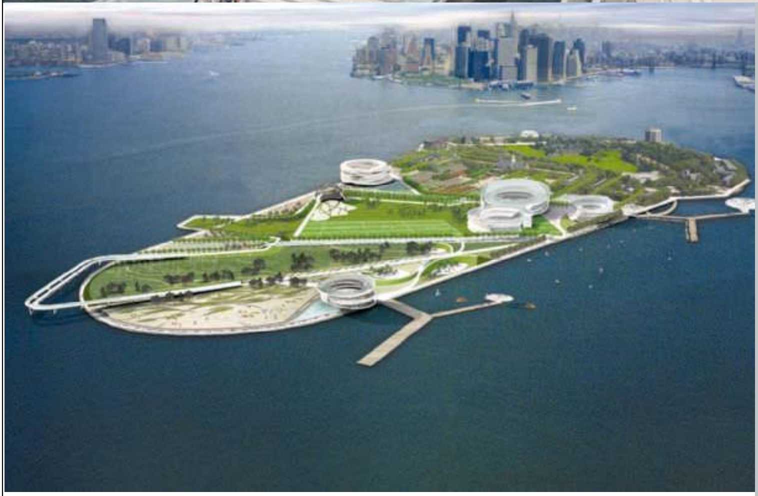
Five variations on the theme of Governors Island

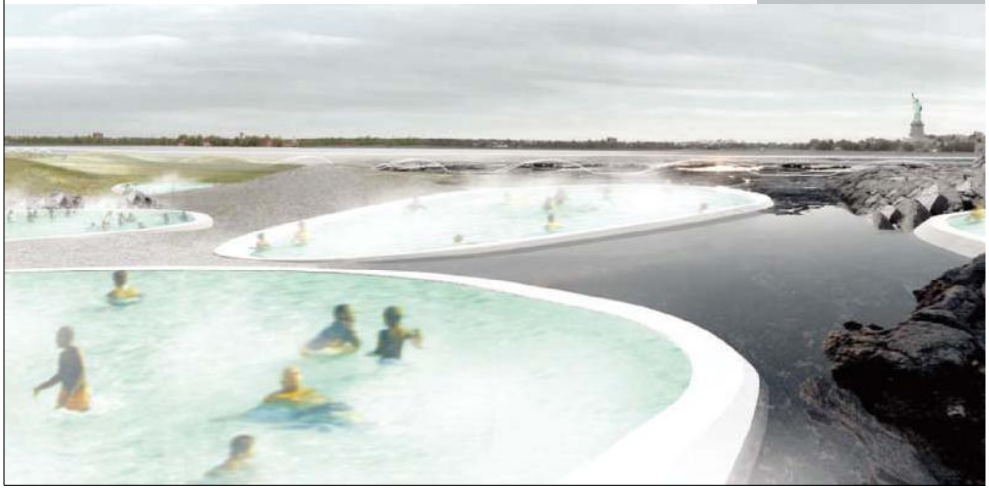
Exhibitions

By John Gendall





Hargreaves stretches a promenade out from the island's south end (above) and creates axes pointing toward iconic views (left). Field Operations emphasizes the island's native ecologies (below).

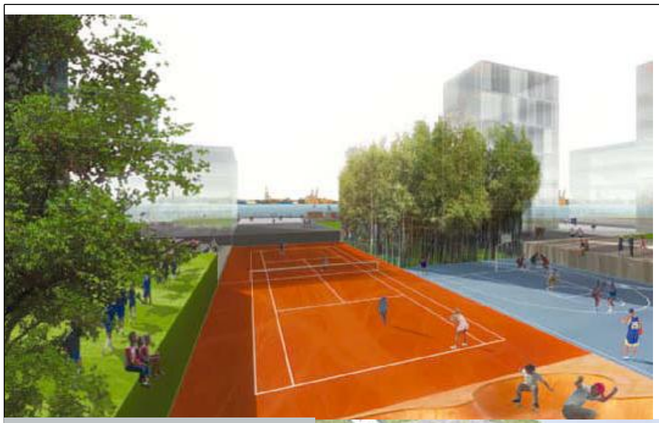


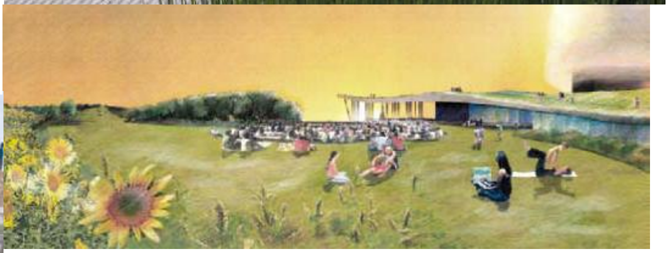
PHOTOGRAPHY: COURTESY GIPEC

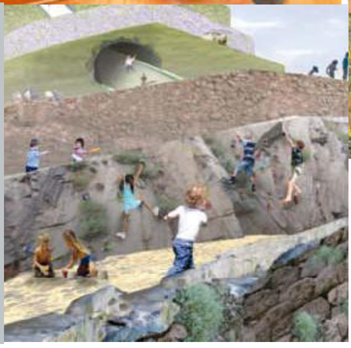
The Park at the Center of the World. *At Center for Architecture, New York City, through August 25, 2007; Building 110 on Governors Island, through September 2, 2007.*

Though barely 800 yards from Lower Manhattan, Governors Island, in New York harbor, suffers from obscurity and neglect. First established by the British in 1698 for the "benefit and accommodation of His Majesty's Governors," it served from 1783 to 1996 as a post for the U.S. military and Coast Guard but is now consigned to hosting their derelict buildings. Access to the 172-acre island has been limited to intermittent ferry service by special appointment, so even since the island was decommissioned, few New Yorkers have ever been there.

The northernmost 22 acres of the island are a designated National Monument, protecting the early-19th-century fortifications there. In 2003, after years of failed proposals for the site, including casinos and a United Nations campus, the federal government transferred the remaining 150 acres to the State of New York at a cost of $1. The Governors Island Preservation and Education Corporation (GIPEC), which maintains control of this section, issued a Request for Qualifications in 2006, hoping to jump-start development of the island. The proposals of the five short-listed teams—Hargreaves Associates/Michael Maltzan Architecture; Field Operations/WilkinsonEyre; Wallace Roberts Todd (WRT)/Urban Strategies; REX/Michel Desvigne; West 8/Diller







REX proposes to grid the island, providing space for activities such as tennis or gardening (top left and right). WRT envisions ample park and recreation areas (bottom right). A “vertical landscape” proposed by West 8 would define the island’s south end (bottom left).

Scofidio + Renfrew/Rogers Marvel—selected from a group of 29 submissions, are now on display at the Center for Architecture in New York and in Building 110 on Governors Island.

Establishing and reinforcing the island’s visual and programmatic connections to the city, landscape architects Hargreaves Associates proposed four landscape typologies—athletic fields, beach, perennial gardens, and a meadow of grasses and pine—separately delineated by pedestrian axes that open up sight lines toward iconic views. Surrounding these areas, a promenade along the island’s entire perimeter creates new edge conditions. Other proposed features, such as plazas, gardens, and Michael Maltzan–designed buildings for cultural programs, animate the procession along this stretch and emphasize views outward. The strength of this proposal by Hargreaves, designer of such large urban parks as San Francisco’s Crissy Field, is the balance between its promise to connect with the city and its flexibility to accommodate Governors Island’s future needs.

By contrast, New York–based landscape architects Field Operations, with WilkinsonEyre, a London architectural firm, casts the island and its natural features as a foil to the city. With a single landscape typology, this team creates a series of mounds and pools on Governors’ south end that accentuate the changing relationships between the topography and surrounding body of water. When daily high tides flow in, only the mounds and the horizontal plane of an elevated promenade remain exposed, while the supports become submerged beneath the water. With thermal pools, botanical pavilions, and a marina, this program is focused on the experience of the wind, water, and changing environment.

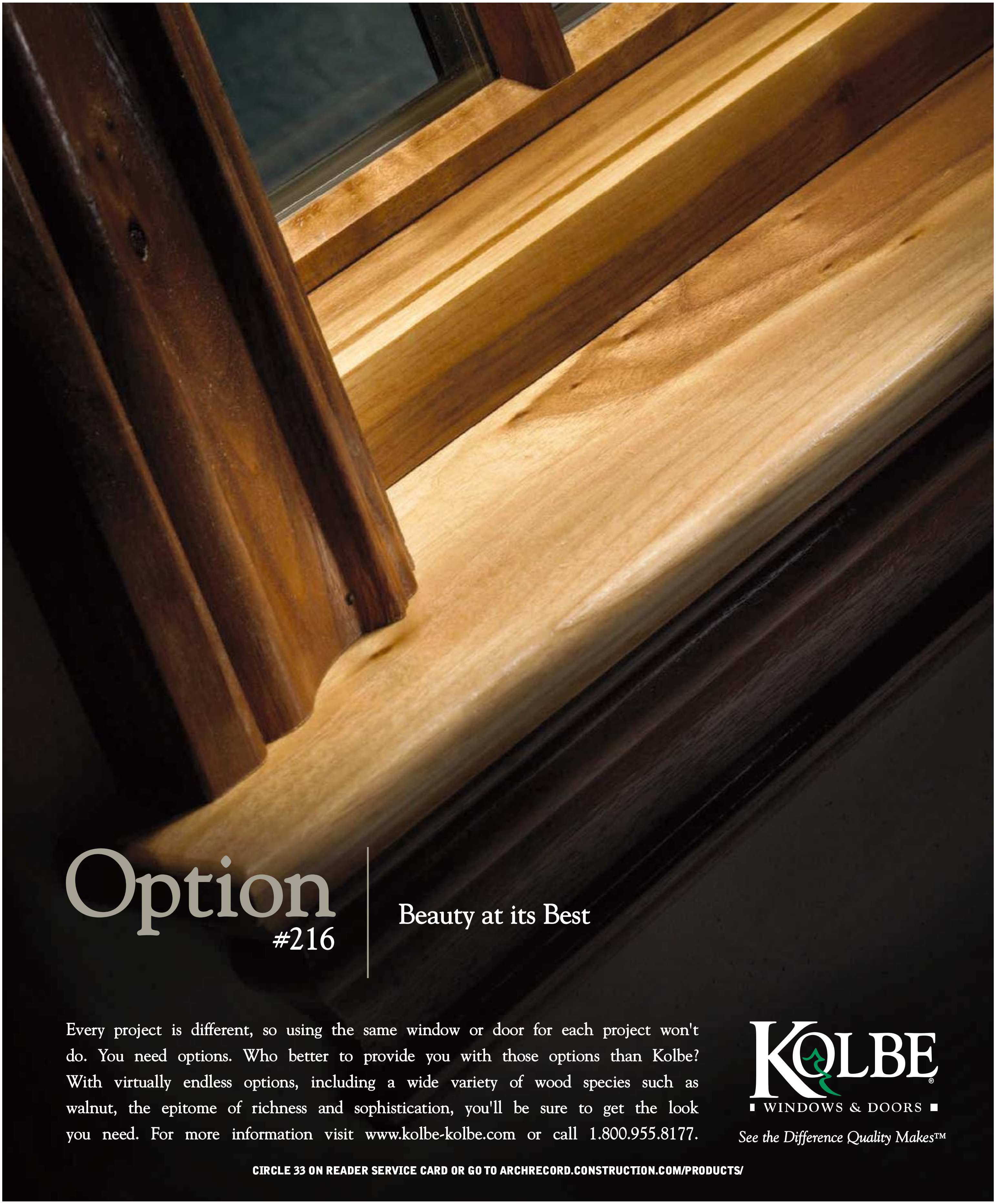
Dominating the proposal by REX (an OMA spin-off in New York) and landscape architect Michel Desvigne of Paris is a declaration in bold letters: “This is not a landscape proposal. This is a development strategy.” In the spirit of OMA principal Rem Koolhaas, this is a team of self-conscious provocateurs. They call for gridding the island, a move inspired by the Jeffersonian grid that allowed westward expansion. REX hopes this grid will accommodate what it insists is the only viable intervention here: investment by developers. The need to improve the island’s appeal and accessibility emerges in this scheme, but obviously a gridded island of development already exists, a mere 800 yards away. Manhattan’s grid works because of the urban engine (with economic, demographic, infrastructural, and other forces) fueling it. And Jefferson’s grid relies on its own slew of cultural, political, and religious forces. Though the proposal is compelling, it remains doubtful that a city park can or should be “settled” following either of these gridded paradigms.

Meanwhile, WRT of Philadelphia proposes a traditional green city park. The plan orients itself around a large meadow with most program around the perimeter. The large firm’s design is a reasonably pleasant—but formulaic—response to a unique condition.

Taking a radically different approach, West 8 (Dutch landscape architects), and Diller Scofidio + Renfro and Rogers Marvel (both New York architectural firms), propose sculptural landforms at heights reaching 180 feet and with names like “Babylonic Hill” and references to “return to lost paradise,” evoking a landscape theme park. The forms resemble ziggurats or are translucent bulbous domes, and house, for example, art galleries, greenhouses, and a floating oyster bar. Three thousand custom wooden bicycles and lounge chairs would be available free of charge for park visitors.

With its physical autonomy and absence of a residential program (due to current guideline restrictions), the site lacks the sort of casual, improvised use that makes other urban parks vibrant. The two teams that most effectively capitalize on this condition are Field Operations, with its emphasis on the island’s natural features and “otherness” in confident juxtaposition to Manhattan, and Hargreaves, with its strong connections to the city. ■

ONLINE: To view additional images, go to ***architecturalrecord.com/features/***.



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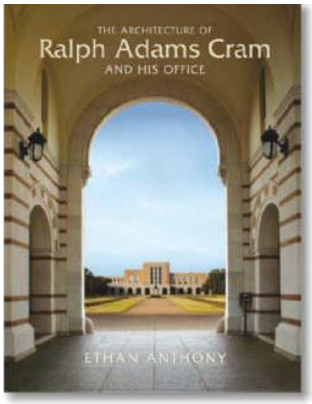
Jockeying for places in last century's design pantheon

Books

The Architecture of Ralph Adams Cram and His Office, *by Ethan Anthony. New York: W.W. Norton, 2007, 256 pages, $60.*



Ralph Adams Cram (1863–1942) was as well known in his day as his contemporary Frank Lloyd Wright. He was the most significant ecclesiastic designer since Richard Upjohn, author of 26 books, and the designer of everything from war memorials to skyscrapers. Yet, if this High Church Anglican son of a Unitarian minister, namesake of Emerson and John Adams, is remembered at all, it is as a quixotic medievalist and erstwhile partner of Bertram Goodhue.

Ethan Anthony, who went to architectural school in Boston and had never heard of Cram, wondered how an architect who did so much—and so well—could be so forgotten. Hired by Cram's successor firm, HDB/Cram and Ferguson, Anthony immersed himself in the work and archives of America's greatest Gothicist and preeminent campus planner. His book is an attempt to restore *Time* magazine's 1925 "Man of the Year" and the first chairman of the Boston city planning board to his rightful place in the architectural pantheon.

Cram's mentors were Pugin and Ruskin, and for him, architecture was a moral crusade. Unlike Gropius's and Le Corbusier's, Cram's cure for modern society's ills was "a return to small communal villages," inspired by both the Middle Ages and early New England.

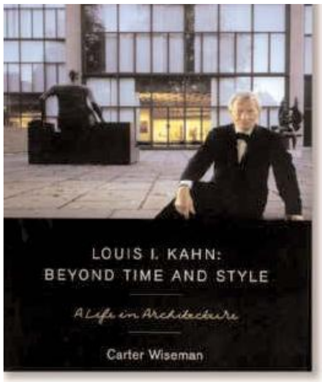
Anthony's book asks us to reconsider Cram's remarkable body of work: West Point, in upstate New York; Princeton University, in New Jersey; and St. Thomas Church and the Cathedral of St. John the Divine, in New York City. No one did the picturesque tower and cloister better. Baptists, Unitarians, Swedenborgians, and Catholics craved Cram's revivified Gothicism, but he was an equally adept master of Georgian, Byzantine, Spanish Baroque, and Romanesque modes. At Rice University, in Houston, Cram developed a new collegiate vocabulary that was both traditional and modern.

Cram's career could fuel an academic industry like that spawned by Wright scholars, perhaps with Anthony's solid introduction as a foundation. Sadly, Cram's art deserved some stunning new photography instead of the often frumpy, black-and-white images assembled from the firm's files. Even so, this volume reacquaints us with Cram and argues for a definitive study of the greatest architect America ever forgot.
William Morgan

Louis I. Kahn: Beyond Time and Style: A Life in Architecture, *by Carter Wiseman. New York: W.W. Norton, 2007, 284 pages, $60.*

Carter Wiseman's affectionate and astute biography of Louis I. Kahn (1901–74) might come as no surprise to readers familiar with Wiseman's portraits in *Twentieth-Century American Architecture* (2000). That survey showcased Wiseman as fiercely acerbic in his judgments of architects from Wright to Eisenman, with only Kahn winning nearly unqualified praise ("a magisterial body of work"). In fact, the earlier book, which praises Kahn for "his ability to transcend period and style," explains the confounding title of this biography—what architect practices "beyond time?"

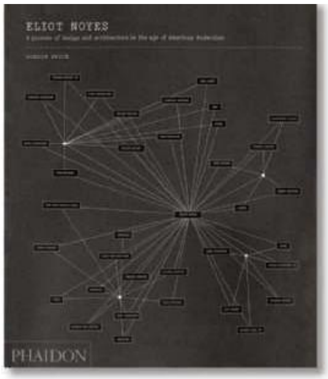
Once past the title, the reader gets an exquisitely written, handsomely illustrated, multidimensional biography that judiciously balances the drama of Kahn's undisciplined romantic life with the extraordinary discipline of his professional life. While forthrightly acknowledging Kahn's foibles as an architect, his notorious slowness in completing work, and his questionable construction knowledge, Wiseman tracks with meticulous care Kahn's singular ability to synthesize ancient and contemporary architecture.



Particular credit should be given to the biographer for noting that Kahn's romantic affairs with female architects in his firm were intellectual as well as sexual adventures, citing clearly the major influence Anne Tyng had on Kahn's design for the Yale Art Gallery. The brutal psychological irresponsibility Kahn demonstrated toward his wife, lovers, and children is noted but not luridly exploited. Kahn's warmth and humanity are depicted in his association with Jonas Salk, resulting in the Salk Institute for Biological Studies, in San Diego, arguably Kahn's greatest achievement. Wiseman gradually and seamlessly transitions from the early days of the Kahn/Salk friendship to the dramatic unfolding of the architectural masterpiece that simultaneously evokes ancient Greece and contemporary California, an architecture transcending avant-gardism or nostalgia, a construction for the mind and soul in exquisite equilibrium. *Norman Weinstein*

Eliot Noyes, *by Gordon Bruce. London: Phaidon Press, 2006, 239 pages, $70.*

Like many of the architects and designers who came to prominence in the U.S. in the post–World War II period, Eliot Noyes (1910–77) was a child of privilege, or at least of lineage. Because his father was an academic, Noyes didn't enjoy the wealth of a Philip Johnson or an Edward Larrabee Barnes. But descended from Mayflower New Englanders, he was educated at Philips Andover, Harvard College, and the Harvard GSD. He worked for Gropius and Breuer before going out on his own to design houses, office buildings, typewriters, and other products. He also directed the industrial design department of the Museum of Modern Art in New York in the 1940s.



Noyes was one of the first architects to practice "institutional branding," developing total corporate images that identified such industrial giants as IBM and Cummins Engines by their architecture and products, down to the toilet-paper dispensers in their bathrooms. Critical of the "design schizophrenia" that he initially encountered at IBM, he replaced messy variety with design consistency. Noyes's influential typewriter designs for IBM, projects that Gordon Bruce compares to Marcello Nizzoli's Olivetti products, are the equals of much of what came out of Europe in the 1960s.

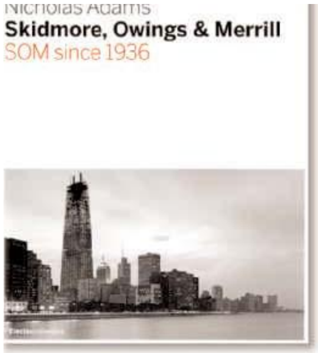
Noyes also designed corporate office complexes, buildings that today look not only dated but rather banal (the quintessential "IBM card" aesthetic). His work for Mobil, including prototypical filling stations as well as the gas pumps, was among his best. I still remember how cool those pumps looked in the 1960s.

Bruce, who worked for Noyes, has written a complete, engaging, and detailed survey of Noyes's contribution. The text approaches hagiography but, thankfully, doesn't cross the line. Unfortunately, his book is printed in Courier font, like that found on the typewriters Noyes designed, a mistake that makes the book hard to read.
Thomas L. Schumacher

Skidmore, Owings & Merrill, SOM Since 1936,
by Nicholas Adams. Milan: Electa, 2006, 338 pages, $45.

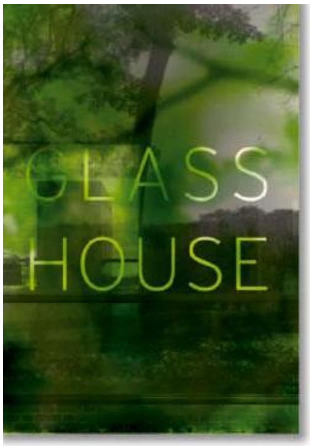
Skidmore, Owings & Merrill (SOM) was, at one point, the largest architectural firm in the world. It all started with two brothers-in-law, Louis Skidmore and Nat Owings, working on the Century of Progress Exhibition in Chicago in 1936. They added an engineer, John Merrill, founded a firm, made it grow, and made history, as detailed in this hefty, boxed tome. Yet, as Nicholas Adams avers, SOM has been marginalized in major histories of the Modern movement. It was disparaged as a corporate mill churning out Taylor-made buildings. Frank Lloyd Wright called the firm "Skiddle, Own-More, and Merrily," and one of their Chicago nicknames in the 1960s was "The Three Blind Mies." Adams believes SOM deserves better, which is the raison d'être for his book.

The firm's most important designers were Gordon Bunshaft in New York, Chuck Bassett in San Francisco, and Bruce Graham and Walter Netsch in Chicago. This book concentrates on the work these partners completed between World War II and the early 1980s. Most of the photos are in black-and-white; it was a black-and-white era. Adams argues for the seminal importance of a few buildings, like Manhattan's Chase Manhattan Bank and Lever House, two of the best curtain-wall towers of the 1950s, and of the United States Air Force Academy Chapel in Colorado Springs, Colorado, all buildings that are included in anthologies of the period. Adams also gives us some interesting insights and anecdotes about patronage and the influence of clients on SOM's work. In the case of Lever House, the client provided the building's basic idea.



Unfortunately, Adams's text—like his depiction of Gordon Bunshaft as a kind of aesthetic sponge and eclectic—is often weak and pedestrian, thereby reinforcing the reputation of SOM as a firm for and of the man in the gray-flannel suit.
T.L.S.

Glass House, *edited by Toshio Nakamura. New York: Monacelli Press, 2007, 256 pages, $95.*



Can you imagine 20th-century American architecture without Philip Johnson (1906–2005)? No architect was more controversial and celebrated, though as Johnson was the first to admit, many were better designers. Johnson was at the forefront of every new movement—and of its demise. His 1932 *International Style* exhibition at the MoMA, assembled with architectural historian Henry-Russell Hitchcock, launched the Modern movement in America. "I was interested in the propaganda, the presenting of the International Style. It was a religion that we all shared," Johnson once told me. But when the Modern movement became architecture's ruling dogma, he abandoned it and in the late '70s inaugurated the Postmodern movement with his Chippendale-topped AT&T Headquarters. A decade later, he discarded Postmodernism for yet another "ism"—Deconstructivism.

His Modern masterpiece, arguably the best work of his career, was the Glass House, completed in 1951. Unlike Wright, who was constantly rebuilding and refurbishing Taliesin, Johnson made no changes to the Glass House after its completion or to any of the other structures he subsequently designed for his New Canaan, Connecticut, estate. "They are artistic statements. You don't go back and repaint a picture," he explained. For Johnson, the consummate aesthete, architecture was art, pure and simple.

Fittingly, this large-format volume, with excellent text by Toshio Nakamura and wonderful photographs by Michael Moran, is a work of art. It showcases Johnson's transparent cube in all seasons and in all moods—in blazing fall colors, in wintry black-and-white, through a long lens, and in myriad details. The book reproduces original drawings and devotes its final pages to other buildings on the estate: a guest house, a Classical folly, an underground sculpture gallery, a painting gallery, a Ronchamp-inspired studio and study, a monument to Lincoln Kirstein, and "Da Monsta" gatehouse of 1995. The estate, with the Glass House at its center, served Johnson as a canvas and laboratory for testing ideas; it stands today as a summary of postwar trends in architecture.
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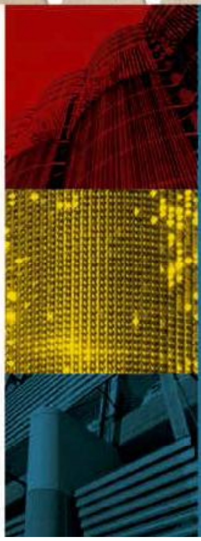

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Can project alliancing agreements change the way we build?

Practice Matters

By Chris Noble

Errors, omissions, inefficiencies, delays, coordination problems, cost overruns, productivity losses—the list of complaints against (and often by) architects and contractors is a long one. The Construction Users Roundtable (CURT) has characterized the difficulties experienced in typical projects as "artifacts of a construction process fraught by lack of cooperation and poor information integration." The historical reasons for this dysfunctionality are many, including a multiplicity of participants with conflicting interests, incompatible cultures, and limited access to necessary information. In an influential 2004 white paper titled in part, "Collaboration, Integrated Information, and the Project Lifecycle," CURT said, "The goal of everyone in the industry should be better, faster, more capable project delivery created by fully integrated, collaborative teams." It is increasingly believed that the achievement of this elusive goal, commonly called "integrated project delivery" (IPD), will be facilitated by the emerging technology of building information modeling (BIM).

While a number of architects and contractors are experimenting with BIM, the very definition of IPD is unclear to most industry participants. In an effort to remedy this confusion, the AIA California Council (AIACC) recently published a report titled, "Integrated Project Delivery—A Working Definition." The report calls IPD "a project delivery approach that integrates people, systems, business structures, and practices into a process that collaboratively harnesses the talents and insights of all participants to reduce waste and optimize efficiency through all phases of design, fabrication, and construction." A key element of this process, says the report, is early, open, and collaborative participation by designers, constructors, and fabricators "beginning when the project is first conceptualized [and continuing] throughout the full life cycle of the facilities."

Chris Noble, of the law firm Noble & Wickersham, chairs the Contract Documents Committee of the American College of Construction Lawyers.

Project alliancing agreements

The AIACC report does not recommend a specific contractual structure for an IPD project, but it does mention one possible model: the project alliance agreement. This model is also referred to in recent CURT white papers, and it is increasingly mentioned in programs, meetings, and symposia exploring the progress and potential of IPD. While virtually unknown until recently in the U.S., this model has a proven track record in Australia, most significantly in the design and construction of a new National Museum in Canberra.

In the National Museum project, the owner and the primary designers and constructors were organized into an integrated group called the Acton Peninsula Alliance, under a single agreement signed by all of them. Alliance members were chosen through a rigorous process in which candidates were evaluated not only on their technical skills, but also on their ability to work effectively in a collaborative environment. The selected exhibition design team was led by a Boston-based firm, Amaze Design. Andy Anway, the president of the firm, has referred to the alliance as "a transformative experience that changed the life of everyone who participated in it."

The alliance agreement had as its goal the alignment of interests for the benefit of the project as a whole. Each alliance member (other than the owner) was compensated on an open-book, cost-reimbursed basis, with a preestablished profit amount approved by all other Alliance members. In addition, all of the members received prenegotiated "Gainshare" bonuses if the project as a whole achieved or exceeded agreed-upon goals, and they all paid prenegotiated "Painshare" penalties if the project failed to meet the goals. There was no expressly stated limit on the reimbursable costs payable to each alliance member, although the owner was not obligated to pay more than the amount of the total project budget to all the other alliance members combined.

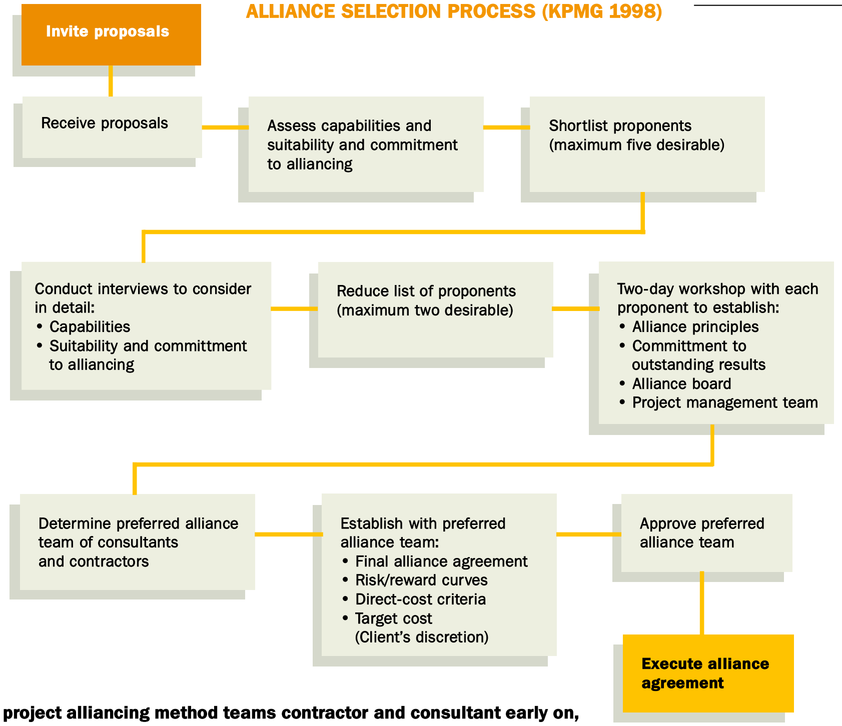
The alliance was managed by a leadership team consisting of one senior representative of each alliance member, including the owner. One hundred percent attendance constituted a quorum at each monthly meeting of the leadership team, and all of its decisions had to be unanimous. A trained facilitator, paid out of the project budget, attended many of the meetings to help guide this unusual process.

Personnel of the alliance members were mixed and matched on a "best for project" basis, and problems were solved in a collaborative "no-blame" environment. In order to achieve that environment, the owner and all of the other alliance members agreed in advance to release one another from all liability arising out of the project except for "willful default" as defined in the alliance agreement. This definition excluded "any error of judgment, mistake, act, or omission, whether negligent or not, made in good faith by an alliance member," for which no claims could be made by the owner or any other alliance member either during or after the design and construction process.

The project alliance delivery method was developed for the purpose of overcoming extreme challenges and achieving "breakthrough" results, where "business as usual" performance would not be sufficient. It achieved these goals in the National Museum project, which was completed within a fixed budget and opened on schedule on the 100th anniversary of the Australian Federation. It has also been used successfully in several dozen Australian public works and infrastructure projects, and the government of the province of Victoria has recently promoted it in a detailed *Practitioner's Guide* (available online at www.dtf.vic.gov.au). However, project alliancing has not been used in any other Australian vertical building project since the completion of the National Museum in 2001. According to Carey Lyon, immediate past president of the Royal Australian Institute of Architects, possible reasons for this include the reluctance of Australian contractors to give up the adversarial approach that is “built into their business model.”

“However,” says Lyon, “the use of BIM and integrated project delivery will take away the ability to drive wedges into the information chain. This will open up significant opportunities to redefine contracting, and could lead to wider use of project alliancing.”

ALLIANCE SELECTION PROCESS (KPMG 1998)


Invite proposals
Receive proposals
Assess capabilities and suitability and commitment to alliancing
Shortlist proponents (maximum five desirable)
Conduct interviews to consider in detail:
• Capabilities
• Suitability and committment to alliancing
Reduce list of proponents (maximum two desirable)
Two-day workshop with each proponent to establish:
• Alliance principles
• Committment to outstanding results
• Alliance board
• Project management team
Determine preferred alliance team of consultants and contractors
Establish with preferred alliance team:
• Final alliance agreement
• Risk/reward curves
• Direct-cost criteria
• Target cost (Client’s discretion)
Approve preferred alliance team
Execute alliance agreement

The project alliancing method teams contractor and consultant early on, and provides them with financial incentives for meeting project goals.

Adapting the alliancing model

Here in the U.S., it appears that no major owner has taken the plunge by sponsoring a “pure” project alliance on the National Museum model. However, a number of owners have committed themselves to collaborative, single-contract project delivery systems, in which interests are aligned and risks are shared to a greater extent than in traditional contractual structures. One such owner is Sutter Health Care in California, which has been using a multiparty “integrated agreement” for its $6.5 billion building program.

Drafted by Sacramento attorney Will Lichtig, the Sutter agreement seeks to promote collaboration and project success through such methods as early assembly of a core group consisting of the owner, architect, and contractor and an integrated project team jointly selected by the core group; joint management and decision making by the core group; establishment of contingencies and incentive pools shared by both designers and constructors; and application of “lean construction” principles developed and advocated by the Lean Construction Institute. The LCI is a nonprofit group which aims to apply techniques learned in manufacturing to help streamline construction.

While it doesn’t eliminate disputes and liability through a “mutual release” such as that found in the National Museum alliance agreement, the Sutter agreement provides for the establishment of a multitiered system of risk sharing for both negligent and non-negligent design errors and omissions. A “deductible” for paying such costs is funded by one of the contingencies, above which the designer is responsible up to a prenegotiated cap, without proof of negligence. Above these combined amounts, proof of negligence is required.

Many of the principles of the Sutter agreement have been adapted and refined in an integrated contract developed by the U.S. offices of the architectural firm NBBJ. Tom Owens, a principal and general counsel at NBBJ, describes the Sutter and NBBJ forms as “alliancing lite.” Owens says, “They go about as far in the direction of project alliancing as they reasonably can in the current U.S. marketplace.” He freely offers the NBBJ form to owners, architects, and others at www.nbbj.com/access/intdeldraftnbbj.doc.

An integrated contractual approach is being used for a project at the University of Wisconsin that will house the public Wisconsin Institute for Discovery and the private Morgridge Institute for Research. Madison, Wisconsin, attorney Kevin Delorey says that the drafting team started out with something similar to the Sutter form, but over the course of contract negotiations “has departed substantially from that form.” As more information becomes available about this innovative project, it may set a new standard for IPD.

Other owners are putting their toes in the IPD water by developing common project conditions that are intended to be incorporated into separate design and construction contracts. This approach is being taken by Yale University and the Hammes Company, a large health-care development consultant. While these documents are intended to coordinate project relationships and reduce disputes, they don’t adopt as many of the IPD principles identified in the AIACC report as the Sutter and NBBJ contract forms do.

Integrated project delivery has captured the attention of both the AIA and Associated General Contractors, which are each planning to issue some kind of IPD contract materials within the coming year. According to AIA Documents Committee chair Tim Twomey, “the task group charged with developing the AIA’s materials is looking carefully at current examples of IPD contracts, like the project alliance, Sutter, and NBBJ documents, to be sure that whatever is issued by the AIA benefits from the experience of current approaches.”

Changing the system

It may ultimately come to pass that integrated project delivery will transform the contentious, litigious, and notoriously inefficient American construction industry, and that it will provide a safe contractual environment for collaboration and the sharing of information through BIM. While some hold out the hope that project alliancing will help to create such a paradise, others are working on more conventional approaches that will move in that direction but can be more easily applied, tested, and learned from in today’s marketplace. ■

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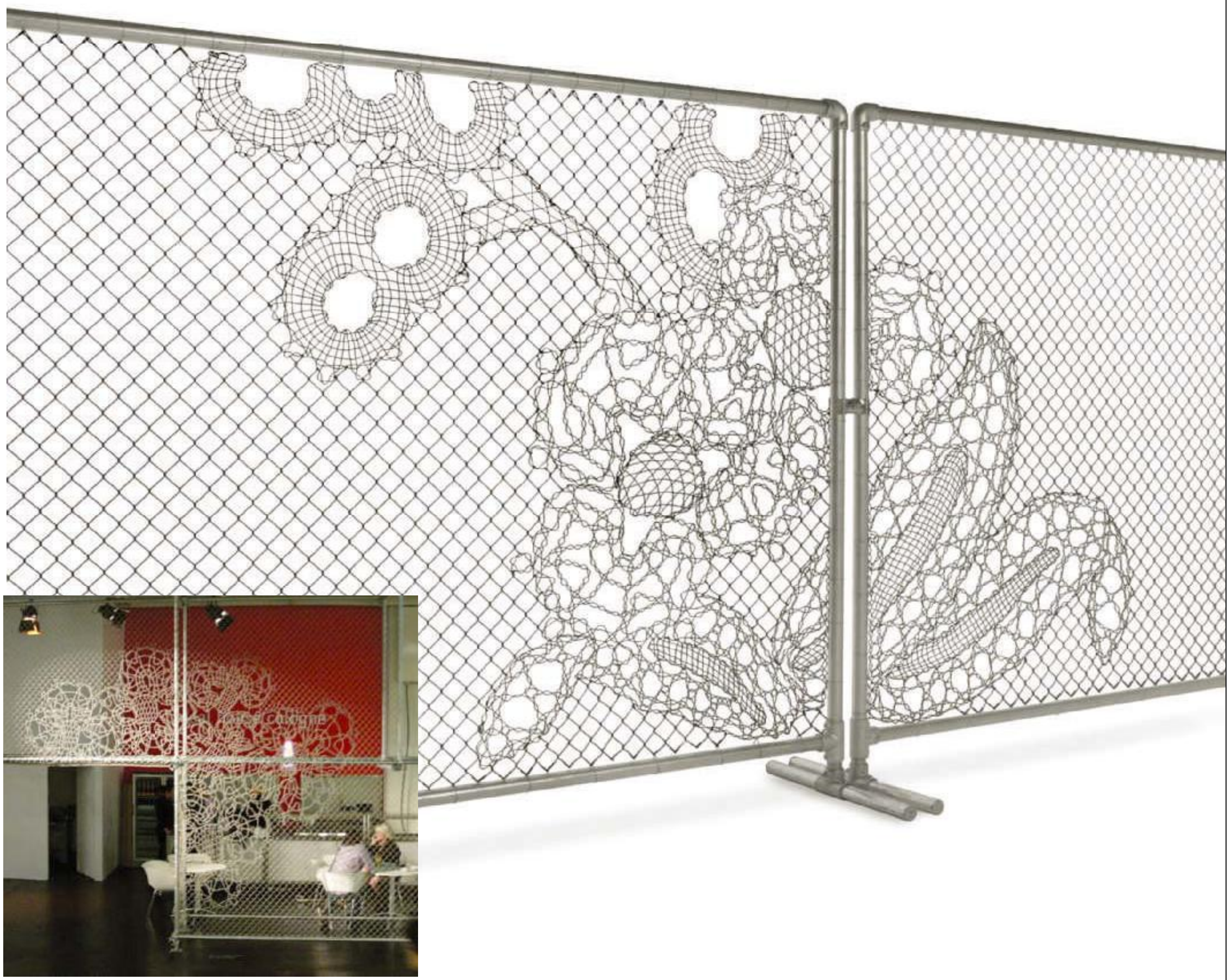

PHOTOGRAPHY: COURTESY DEMAKERSVAN/BAS HELBERS (RIGHT) AND SIETZE KALKWIJK (TOP LEFT)

Patterned fences make good neighborhoods

By Rita Catinella Orrell

Without sacrificing function for ornament, Lace Fence is a refreshing take on the ubiquitous chain-link fence. Designed by the young Dutch firm Demakersvan and produced by IDFence in Bangalore, India, the craftily patterned fencing has sparked interest with art gallery owners, retailers, and architecture firms. Designer Joep Verhoeven was first inspired by a makeshift fence-mending job he noticed in his travels. “The question that followed became the source for the concept,” he says. “What if you would direct the wire into a more decorative pattern?” The patterns are produced by hand for indoor or outdoor use with the same wire as machine-made industrial chain-link mesh. Designs can be created to help discourage climbers, hide or enhance surroundings, deal with harsh weather, or create a custom look. The company currently produces a minimum of 250 square meters (2,700 square feet) of fencing per month in costs ranging from $105 to $187 per square meter (11 square feet). Demakersvan, Rotterdam. www.demakersvan.com **CIRCLE 200**

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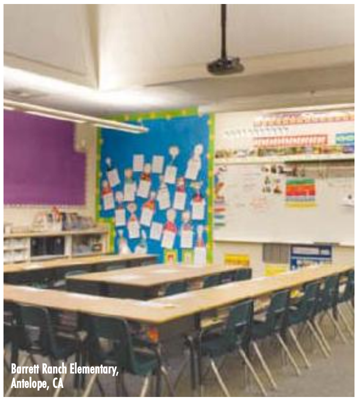

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Trade Show Review Las Vegas • Kitchen & Bath Industry Show

Once largely national in scope, the Kitchen & Bath Industry Show has evolved into an influential international exposition. This May, a record-breaking 44,000 professionals filled three halls of the Las Vegas Convention Center to visit more than 1,000 exhibits representing the world's top designers and manufacturers—including those from North and South America, Europe, Asia, and Australia. This migration of ideas resulted in a merging of European aesthetics and technologies with those from the U.S. *Linda C. Lentz*

1 Inside the box At a room- and people-friendly 55" square x 28" high, the Blue Moon "pool" tub (shown), by Berlin-based designer Jochen Schmidden, features a circular 21"-deep acrylic tub rimmed by a teak or matching deck, plus optional lighting, bench, and stainless-steel clothes stand. Duravit, Duluth, Ga. www.duravit.com **CIRCLE 201**

2 Water toys For color and ingenuity, the Hansa2day and Hansaclear Lux showers can't be beat. The former, a bright saucer-shaped head, tilts to alternate between surge or needle spray. Completely transparent, the latter reveals the water as it flows through and is illuminated by LED hues. Hansa, Norcross, Ga. www.hansa.com **CIRCLE 202**

3 Power wash Designed for electric and induction cooktops, the avantGarde multiMedia Hood integrates 600 cfm ventilation with a high-resolution 17" LCD TV and DVD/CD player. Speakers are front and center beneath the screen; wiring and technical elements are concealed in the chimney. Siemens, Huntington Beach, Calif. www.siemens-home.com **CIRCLE 203**

4 The wow factor The Ono-Highflex kitchen faucet sports a patented spring hose for maximum flexibility with 360-degree swivel. A simple lever switches from filtered stream to pressurized wash, while an elegant flat-topped spout takes care of business as usual. KWC, Norcross, Ga. www.kwcamerica.com **CIRCLE 204**

5 Fool the eye When French designer Jean-Marie Massaud developed his namesake collection he aimed to make the plumbing recede. Thus organically sculpted single-lever basin and bath mixers appear to be—indeed double as—shelves. Water delivery mimics the clarity of nature while keeping its use at bay. Axor, Alpharetta, Ga. www.hansgrohe-usa.com **CIRCLE 205**

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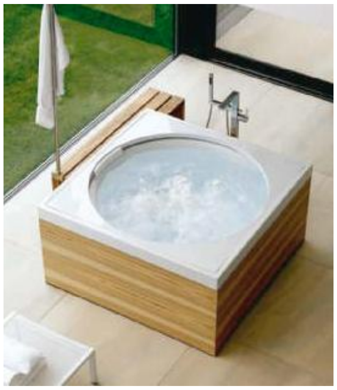
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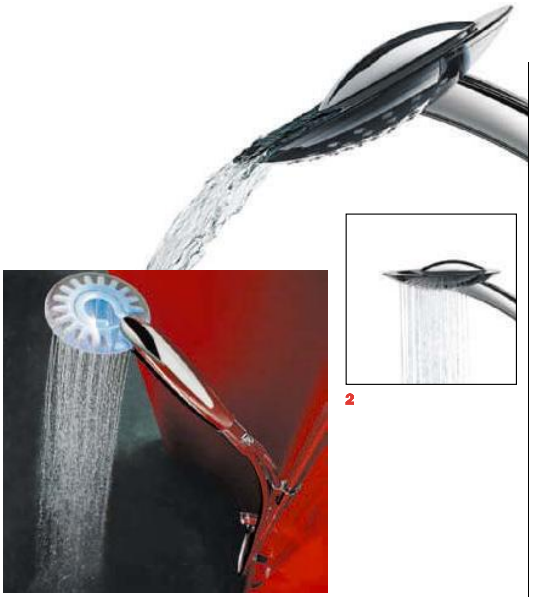
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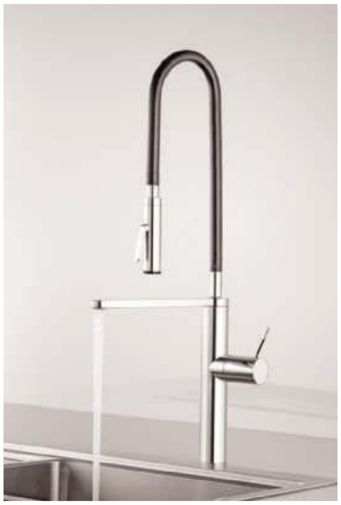
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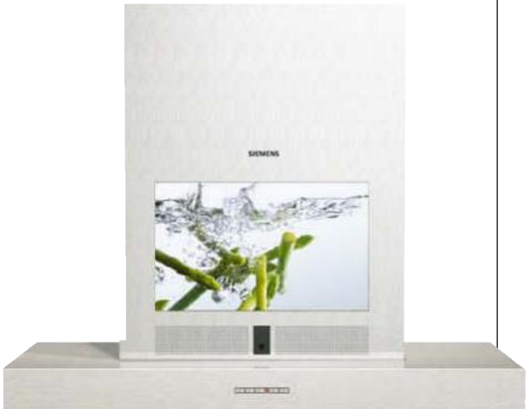

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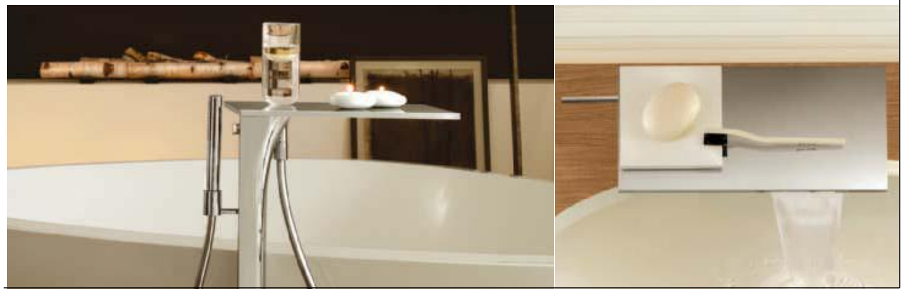

Trade Show Review Las Vegas • Kitchen & Bath Industry Show

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6 Turkish gems Italian industrial designer Matteo Thun's Water Jewels bath suite comprises a sumptuous material mix including ceramic wall-hung vanities in several sizes that accommodate undercounter or countertop basins available in marble, ceramic, VitrA Solid polyester resin, wood, glass, and blue-enameled terra-cotta. Optional polyester resin or wood drain plates, pierced with floral or triangle patterns, add a touch of exotic charm. VitrA, Suwanee, Ga. www.vitra-usa.com **CIRCLE 206**

7 Above and beyond MasterCool modular refrigeration offers a dual compressor system along with thorough halogen lighting up the sides of the units, simple waist-level touch controls, flush integration, and wireless remote monitoring 24/7. The MasterChef motorized DA 424 V island hood eases placement issues by allowing users to easily vary its height as needed. Miele, Princeton, N.J. www.miele.com **CIRCLE 207**

8 Laundry cum spa Available in stainless steel, white, and Wild Cherry red, the SteamWasher and SteamDryer clean and refresh clothing, rendering it virtually wrinkle free via the units' generator-powered SteamFresh cycles that convert water to steam. Optional base drawers provide storage and height for easy access, while the company's remote monitoring system keeps track of wash and dry status anywhere in a home. LG, Englewood Cliffs, N.J. www.lgusa.com **CIRCLE 208**

9 On a roll Available in stainless steel or chrome for 60" single threshold or 72" x 42" bases in one-, two-, and three-sided configurations, the German-engineered Teutonic shower enclosure features industrial-strength rollers that glide effortlessly along its solid stainless steel track so that any user can slide its 79" high by ⅞" thick, 200-pound safety glass panel. MTI, Sugar Hill, Ga. www.mtiwhirlpools.com **CIRCLE 209**

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Rethink: Corridor

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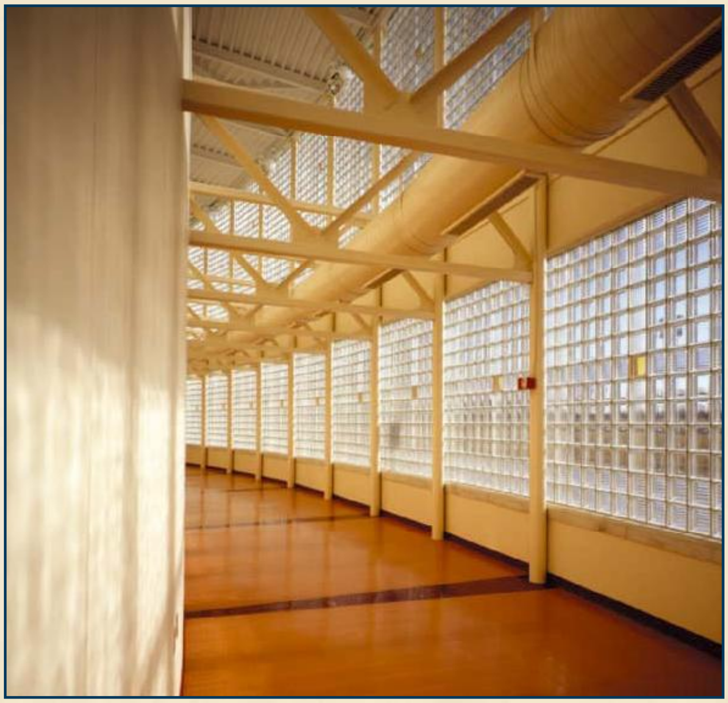
At right, Nitschke Auditorium, University of Toledo
Architect: Smith, Hinchman & Grylls Associates, Inc.



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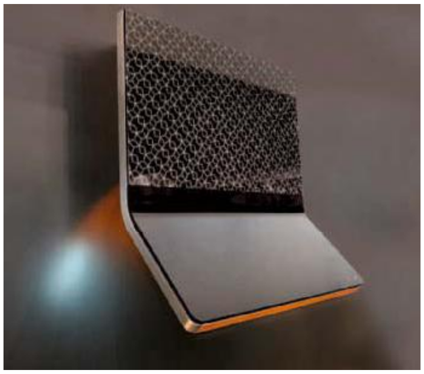

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10 Suspended ventilation The Arc collection of vents pairs with electric Ceran radiant and induction cooktops. Units in plain or etched glossy red, white, or black tempered glass vent through wall or ceiling and operate via discreet touch-controls. Zephyr, San Francisco. www.zephyronline.com **CIRCLE 210**

11 Eastern hues Offering Greenguard air-quality certification and integral Microban protection with NSF 50 certification for food prep, the Silestone Quartz Zen Series targets inner well-being with Japanese-dubbed transcendental shades of white, plum, brown, and gray. Cosentino, Stafford, Tex. www.silestoneusa.com **CIRCLE 211**

12 Go with the flow Exceeding current environmental standards, the FloWise showerhead delivers an impressive 1.5 gpm, using 40 percent less water than typical 2.5 gpm models. Likewise, the FloWise toilet satisfies the EPA WaterSense 1.28 gpf, thus qualifying as a high-efficiency toilet. American Standard, Piscataway, N.J. www.americanstandard-us.com **CIRCLE 212**

13 Fitting in This 125-year-old company based in Emilia Romagna bridges the appliance/furniture gap with its stainless-steel Modular Series, a selection of 24" to 48" gas cook tops, coordinating base cabinet with shelves or drawers, back panel with utensil bar, and adjustable hood. Bertazzoni, Guastalla, Italy. www.bertazzoni-italia.com **CIRCLE 213**

14 Suite dreams DTV II (near left) elevates the WaterTile precedent of version I by adding a 21"-square Ambient Rain overhead shower with ambient LED light patterns, and an integrated sound system with SoundTile speakers (inset) by Polk Audio. The comfortably contemporary Fountainhead Collection (far left) combines elements such as a shelf and mirrored cabinet with internal taps, marble and cast iron lavs, and a trio of vanities in light maple or truffle-stained ash. Kohler Co., Kohler, Wis. www.kohler.com **CIRCLE 214**

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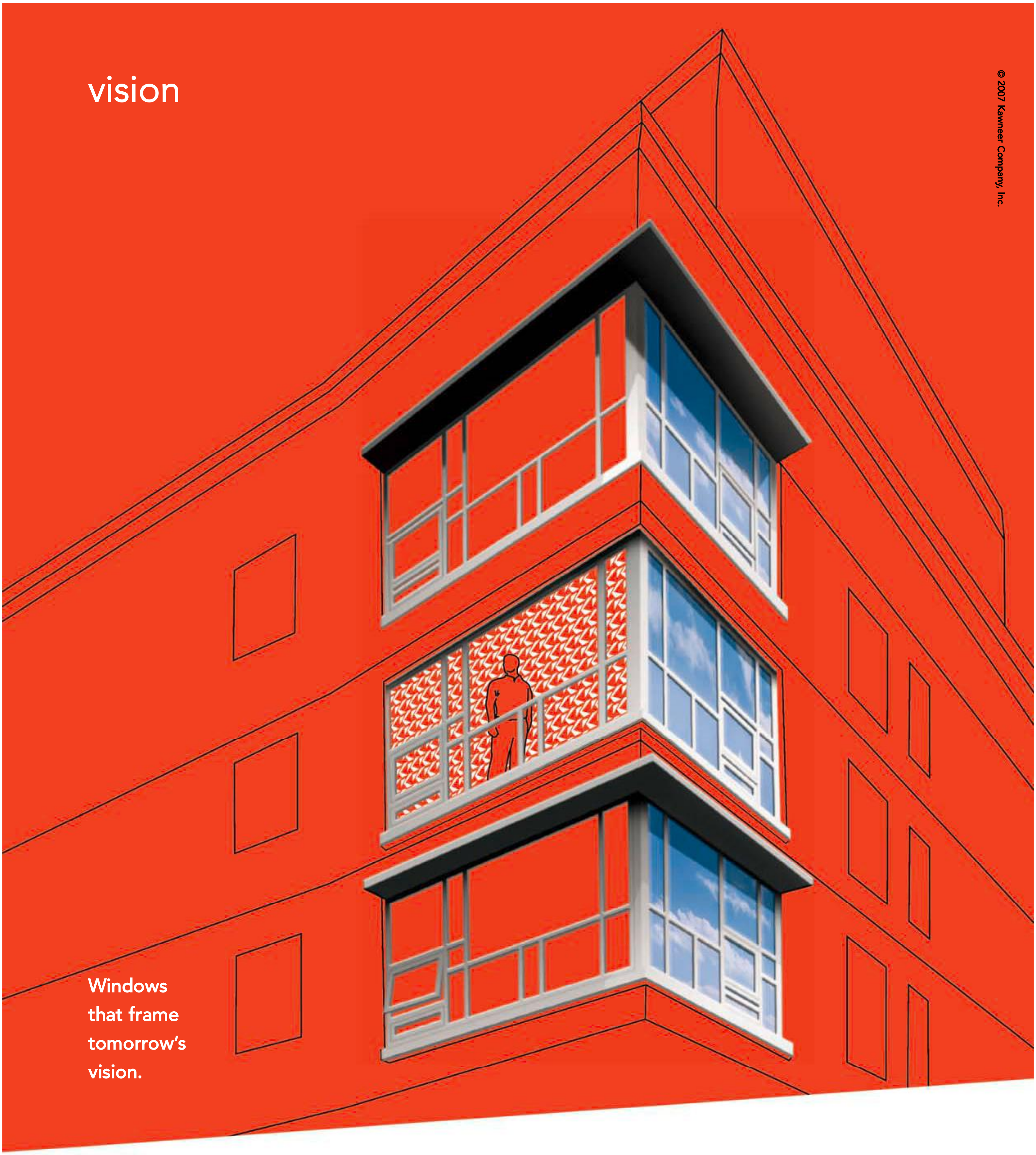
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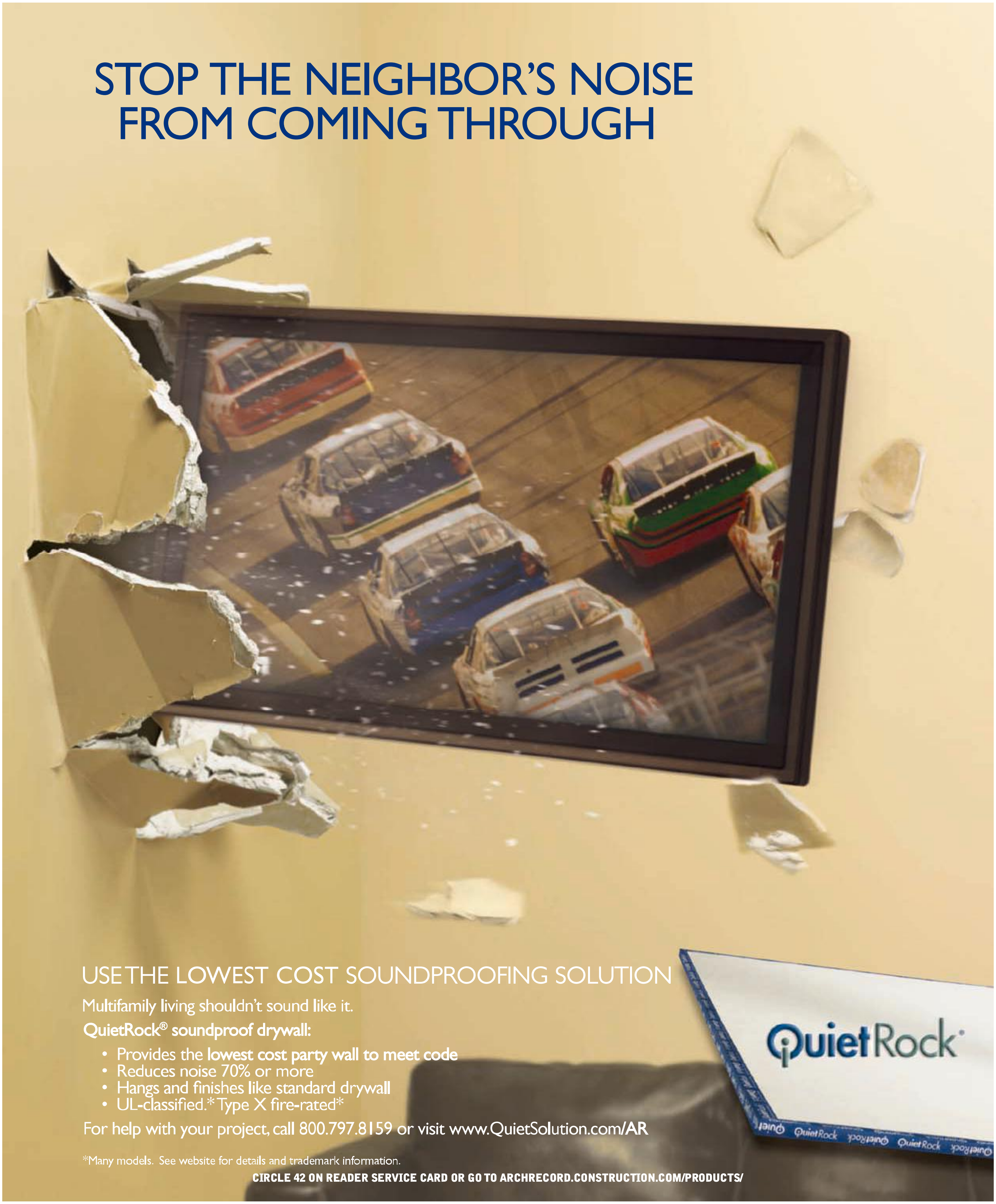

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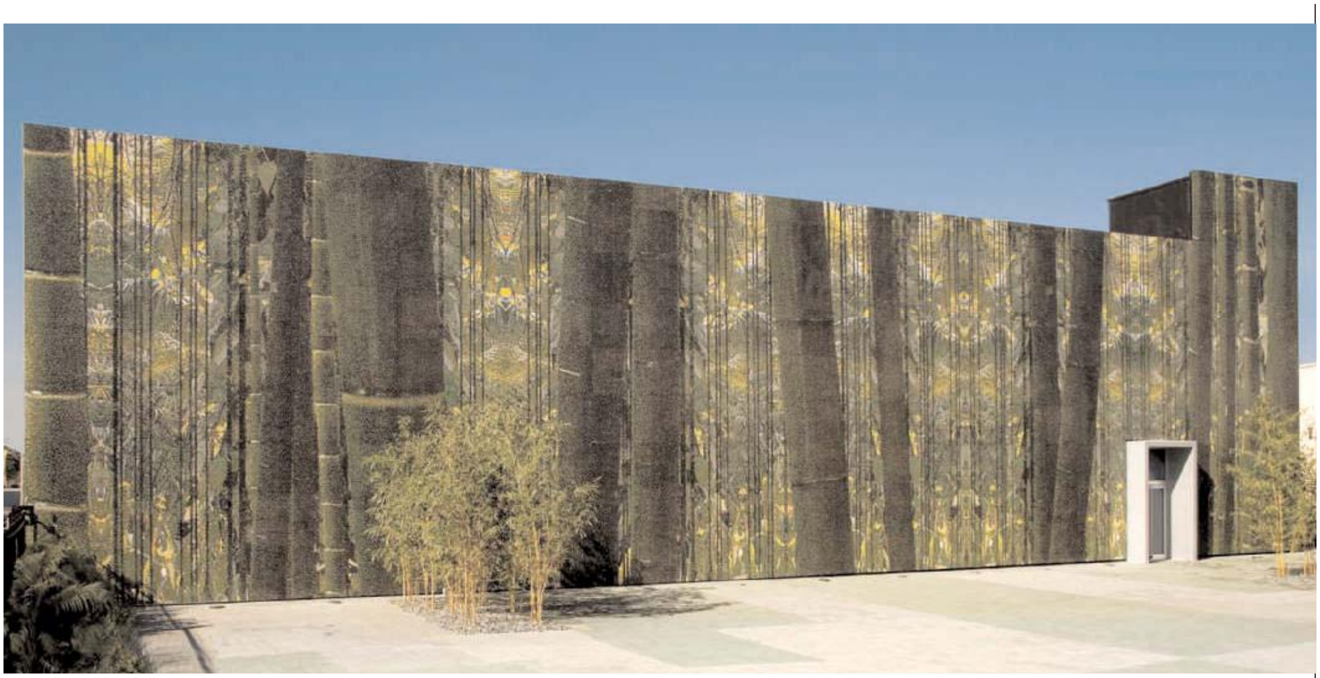
Snapshot



By Christopher Kieran

A different kind of green architecture

More than 1 million Bisazza glass tiles transform the exterior of the Cisneros Fontanals Art Foundation (CIFO) in Miami, Florida. The permanent artwork, which represents a forest of bamboo, covers the entire 4,800-square-foot facade of a 1936 warehouse that reopened in December 2005 as CIFO's offices and exhibition space, and took the AIA Miami Chapter's Award of Excellence for renovation and restoration in 2006.

Ella Fontanals-Cisneros, CIFO's founder, commissioned Miami-based architect René González to create a welcoming space in the city's downtown warehouse district. In an area absent of greenery and dominated by stark, boxy buildings, González wanted to evoke a dense landscape with depth that would contrast with its surroundings. To help him achieve the desired effect, he turned to Italian tile manufacturer Bisazza, with whom he had a strong working relationship, having previously designed the company's "Bamboo White" and "Bamboo Black" patterns.

Although now a monumental mural, the 40-by-125-foot mosaic originated as a graphic composition. The architect layered, flipped, turned, and twisted elements of landscape images, developing a digital design. Bisazza then pixelated the design and assigned a color to each 20-millimeter-square segment. Using more than 200 colors and styles of glass tile, the manufacturer fashioned the mosaic on 4-by-4-foot metal panels at its North American headquarters in Miami. The panels were then transported to the site and screwed onto an aluminum framing system anchored to the concrete wall of the existing facade.

González worked to make the mural as dynamic as possible. "We didn't want something that read as a one-liner," he explains. "It's more about a spatial experience than an iconic image." The abstraction of the design, caused by pixelation, is enhanced by the mosaic's size, which allows it to be read differently from varying distances. "You perceive the image in its entirety from a few blocks away," González explains. "As you get closer, you begin to perceive patterns, colors, and images that are fragmented."

Depth and complexity are necessary qualities to keep this bamboo jungle fresh. Covering a building's exterior with a static image is a bold idea, as the image could soon become stale. González hopes the intricacies of CIFO's facade will provide an engaging and dynamic experience for people, with new discoveries each time they visit. ■

PHOTOGRAPHY: © ORIOL TARRIDAS (TOP); DANIEL ROMERO (BOTTOM)

green
in my city.

I am building my office building on a brownfield site.

Mein pani garam karne ke liye suraj ki garmi ko prayog karta hoon.

I am joining my local chapter.

sustainable design challenge.

I am starting a blog about green homes.

I am going solar.

I am running an energy model before I size the HVAC system.

I am planting a green roof on my apartment building.

I am lowering the resource burden of my products.

I am installing low-flow appliances in my house.

into my first language.

我在向人们介绍全球气候变暖这一现象。

I am launching a global climate initiative.

I am working to make affordable housing green, and green houses affordable.

I am xeriscaping my front yard.

I am using my green school as a teaching tool for the next generation of leaders.

carbon neutral.

I am installing a grey water recycling system in our factory.

Construyo aceras de materiales reciclados.

I am encouraging my employees to become LEED APs.

I am making the business case for biodiversity.

I am designing a net zero energy building.

I am riding my bike to work.

way for federal legislation that supports sustainable development.

I am using Nature as a model to improve my designs.

I am buying green power.

I am advocating for a green school for my kids.

I am replacing my conventional light bulbs with compact fluorescents.

I am choosing native plants for my landscapes.

I am going to buy CO_2 offsets for my travel to Greenbuild.

I am regis
a LEED w

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material

I am offering
environment
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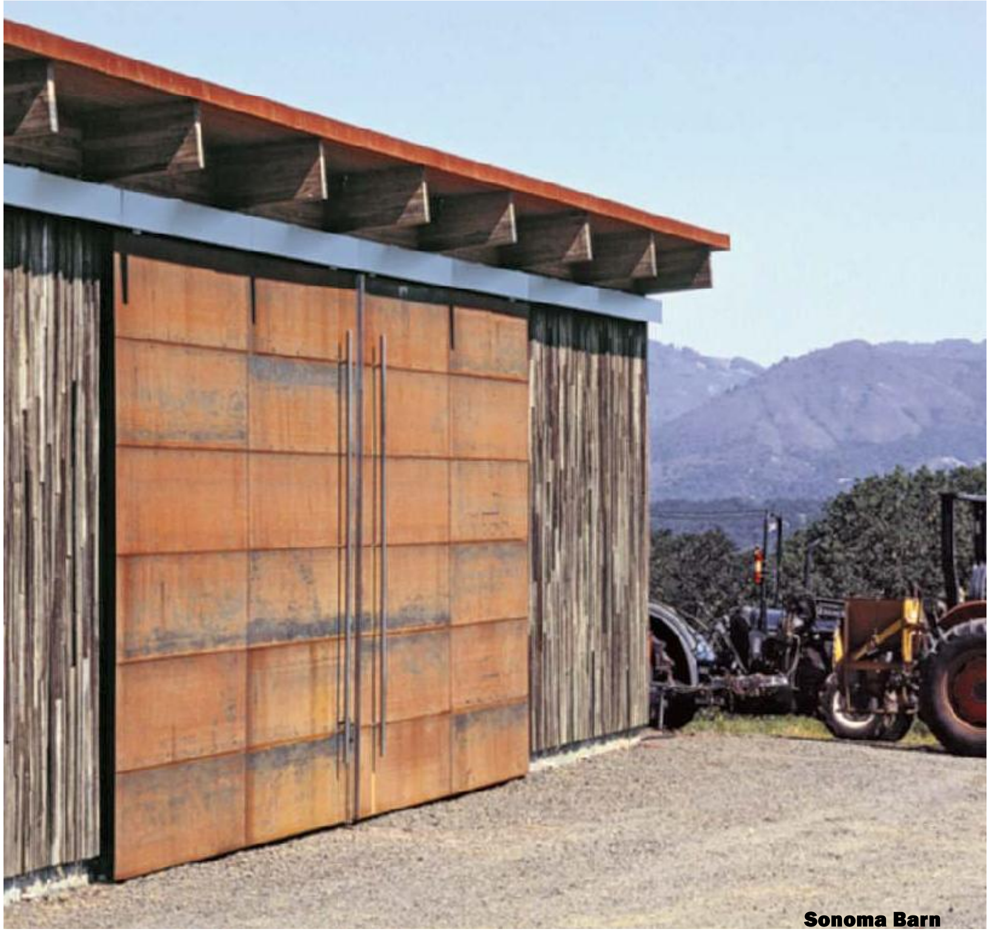
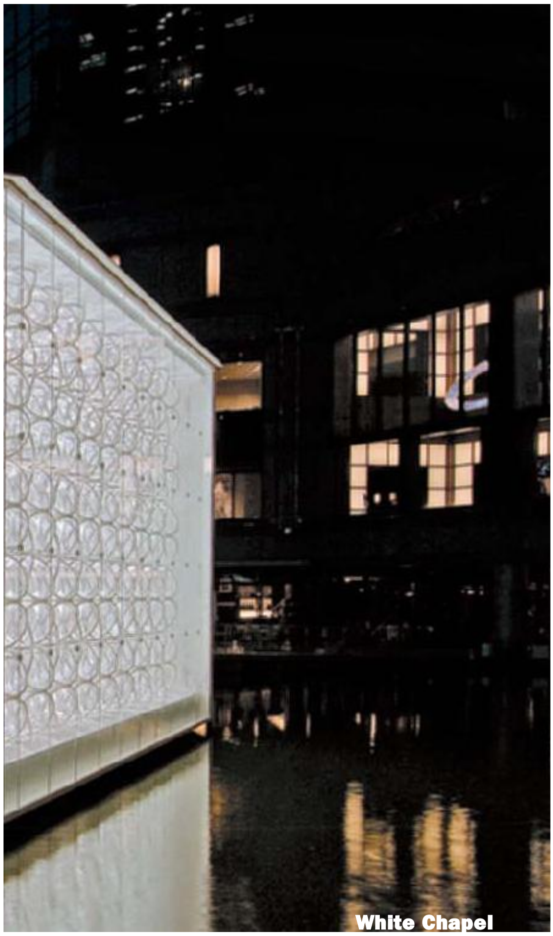


Sonoma Barn

In February, RECORD introduced a serial feature to focus on outstanding—and small—architectural projects [RECORD, February 2007, page 74]. Knowing that such noteworthy buildings may otherwise fail to attract widespread attention, we created a venue to regularly highlight just a few of these remarkable projects. With this installment, we present spaces designed for a broad diversity of users: California agricultural workers, Japanese newlyweds, and Texan architects and artists. The working barn in Sonoma County serves as a landmark for a sprawling 60-acre vineyard, and is an example of fine craftsmanship,

RECORD finds big beauty in three small projects

Made

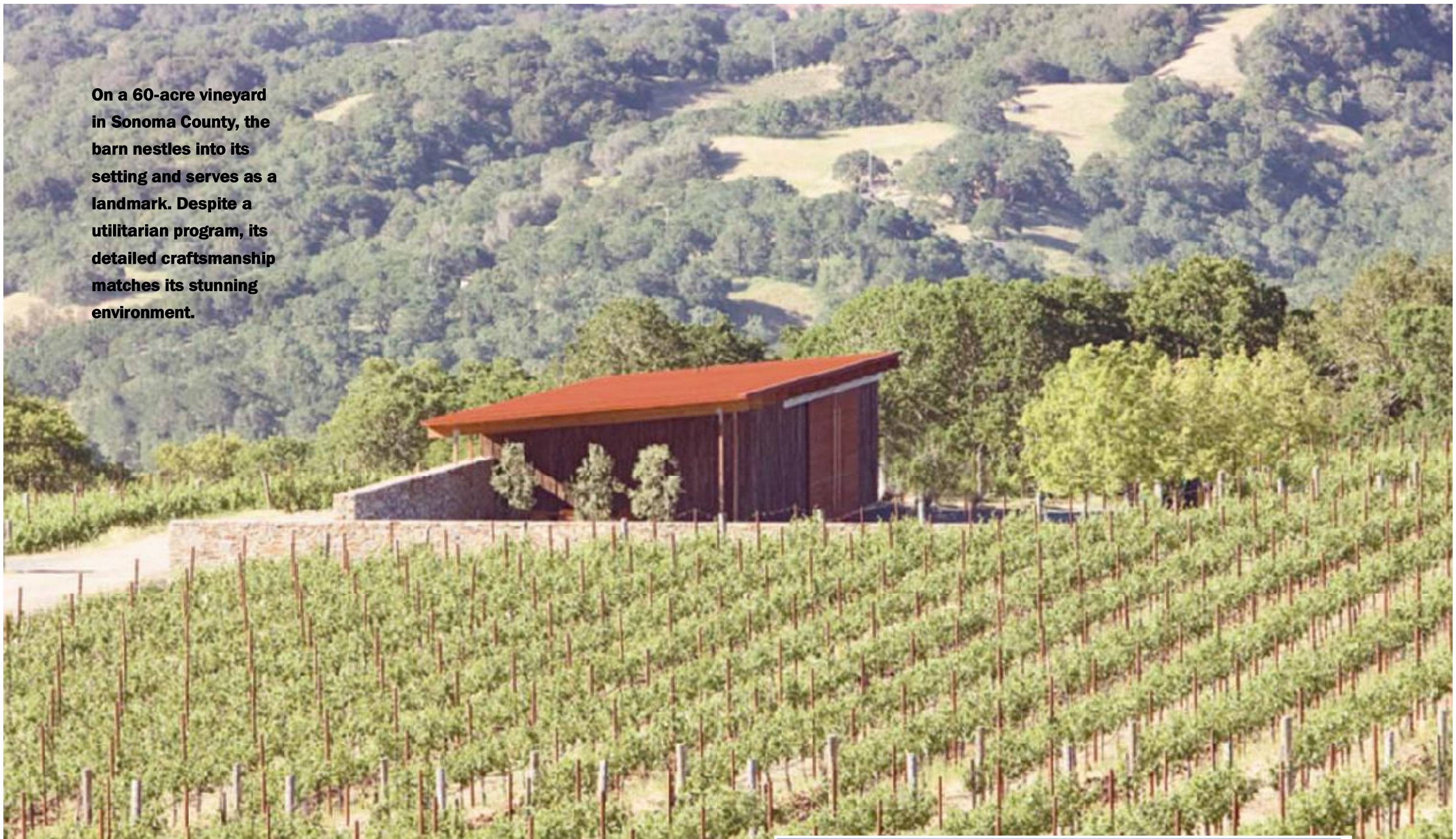

White Chapel

E. 12th Street Studios

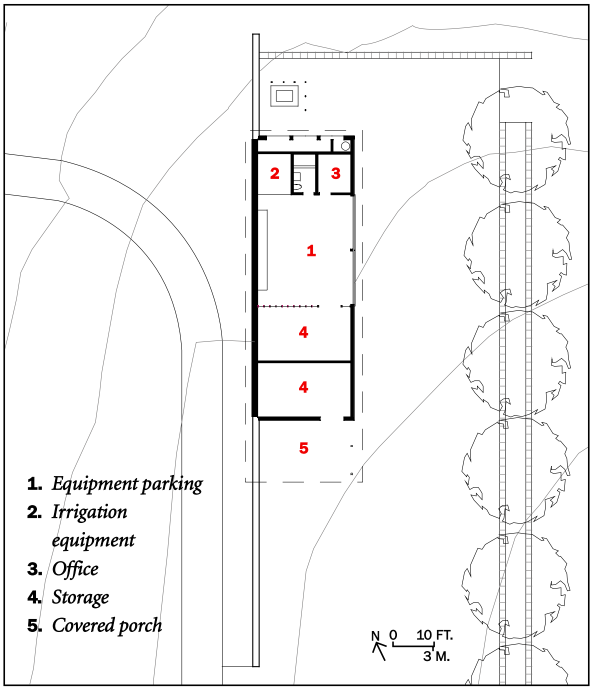
despite its utilitarian building type. The wedding chapel in Osaka elegantly marries ornament and structure with a porous wall made of rings. And in Austin, the collection of small buildings and landscapes made with inexpensive materials provides sustainable, innovative studio spaces for architects and artists.

The designs for each involve experiment and vision, but they are tempered with a careful and tasteful restraint. Trimming unnecessary excess, these buildings underscore the beauty of an architecture made to measure. *John Gendall*

to Measure



On a 60-acre vineyard in Sonoma County, the barn nestles into its setting and serves as a landmark. Despite a utilitarian program, its detailed craftsmanship matches its stunning environment.



1. *Equipment parking*
2. *Irrigation equipment*
3. *Office*
4. *Storage*
5. *Covered porch*

PHOTOGRAPHY (OPENING SPREAD, LEFT TO RIGHT):
© BEN TANNER; SERGIO PIRRONE; ATELIER WONG PHOTOGRAPHY

Sonoma Barn • Sonoma County, California • aidlin darling design

By John King

The firm of aidlin darling design created a small barn in a vineyard at the foot of Mt. Sonoma to serve workers who tend the 60 acres, which produce grapes for the cabernets of several Sonoma County wineries. The barn also functions in a quite different way—as a tough-looking but tranquil landmark for an estate where the firm also designed a residence and guesthouse for a San Francisco family (see page 192).

The real working barn, built with a poured-concrete floor and concrete-block walls, accommodates parking for two tractors. On one side, behind a partition of woven-wire mesh, lies an area to store tools, fertilizer, and pesticides; and on the other, a bathroom and foreman's office.

But if the inside is straightforwardly practical, the exterior is a finely crafted piece of architecture that combines materials in unexpected ways. A long, straight, dry-stacked fieldstone wall forms the barn's western enclosure and lends a sculptural presence to the landscape by extending 50 additional feet to the south and 25 feet to the north. In contrast to this heaviness, the barn's standing-seam Cor-Ten-steel roof hovers above it on widely spaced beams of Douglas fir.

The designers chose the barn's location to best meet the needs of those working the vineyard. The wall responds to aidlin darling's intention to use the barn as an orienting landmark, and to direct the visual perception of the larger estate. Visitors enter a gate, turn to the left, and are immediately confronted by the fieldstone's straight-edged counterpoint to the terrain's slope. It also points to the south, toward the main residence in the distance, while screening off views from the guesthouse to the west of the barn's gravel parking area.

The roof and the barn's sliding-steel-plate doors give the building a contemporary character. The metal complements the rough gravel of the clearing to the east. In the afternoon sun, light ripples from the rusted roof onto the metal stakes, fanning out in rows in three directions to support the young grapevines. Extending 16 feet from the barn on the south side, the roof creates a shaded patio where the crew can rest on warm afternoons.

The carefully placed fieldstone and rusted steel contrast with other more prosaic materials. The structure's Douglas fir columns, attached to concrete footings by off-the-shelf metal ties, support the roof. To create a rain screen for the barn, the architects reused stakes from the spent vineyard that had been in place 50 years before being replanted. Culled from tight-grained, old-growth redwood, the stakes should endure for at least another half-century.

"There was a stockpile of thousands of these old weathered stakes," recalls Peter Larsen, the project designer, conveying the pragmatism embodied in the building itself. "The owner didn't want to build a vanity piece that the workers couldn't use. Before this, they had been working out of a shipping container with a portable toilet." ■

John King is the urban design writer for the San Francisco Chronicle. *He is a two-time finalist for the Pulitzer Prize in criticism.*

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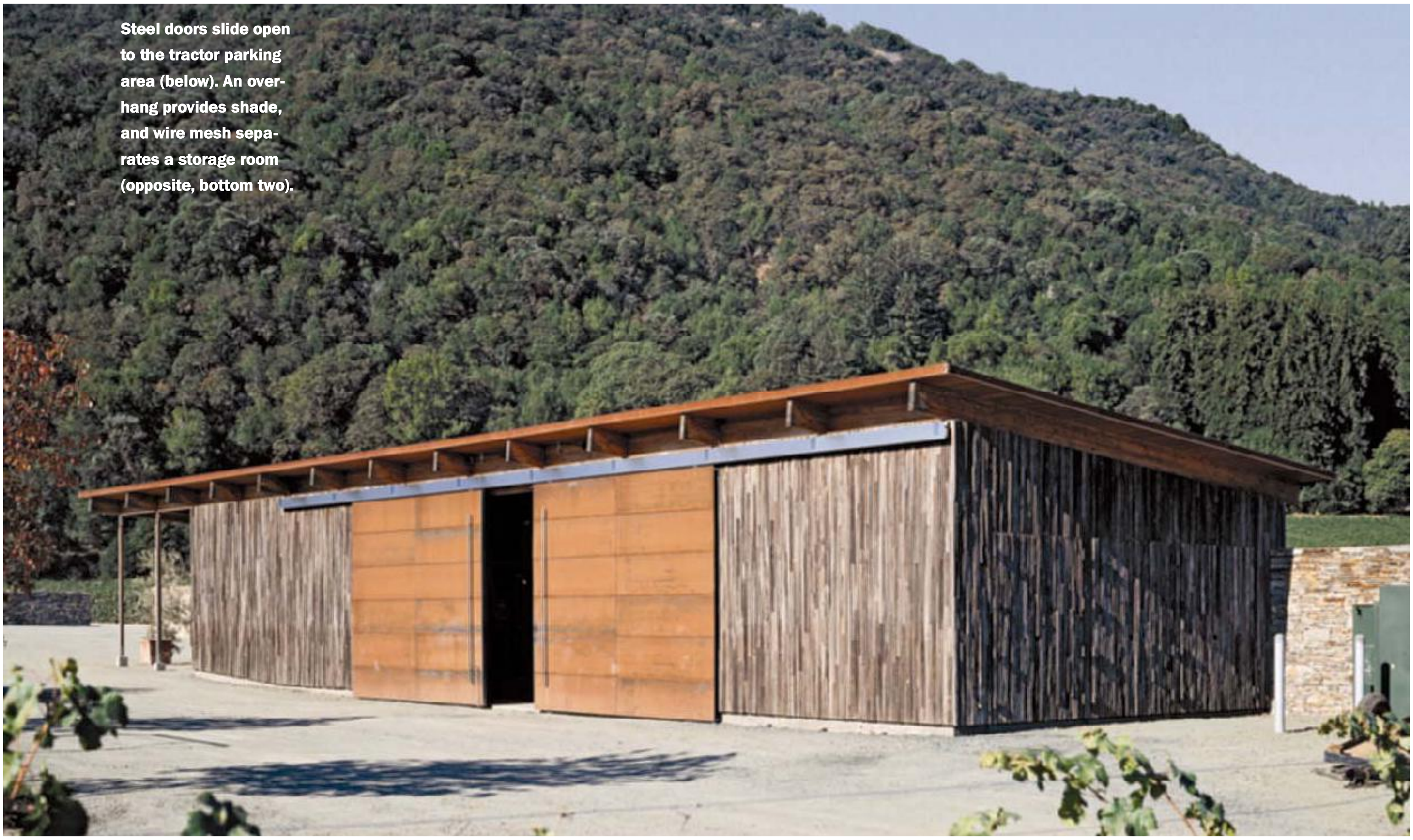


Steel doors slide open to the tractor parking area (below). An overhang provides shade, and wire mesh separates a storage room (opposite, bottom two).

White Chapel • Osaka • Japan • Jun Aoki & Associates

By Naomi Pollock

In Japan, tying the knot can require months of planning, millions of yen, and a lengthy search for the right venue. Though most Japanese practice a combination of Buddhism and Shintoism, many couples have their hearts set on a church ceremony. The Japanese wedding chapel, a pseudo-religious space invented purely for exchanging vows, is the answer to their prayers. Catering to this market, nearly every major hotel in Japan has one. In fact, the bridal business is so lucrative that when the 20-year-old Hyatt Regency in Osaka underwent renovation in 2006, the management decided to create a second faux sanctuary and hired Tokyo architect Jun Aoki to design it.

Impeccably dressed, Aoki's White Chapel is a faceted freestanding pavilion facing the hotel's main lobby. Enclosed in a filigree of structural steel rings, it manages to look glamorous and, at the same time, support its own roof: a cap of shimmering aluminum, visible from rooms in the 25-story hotel. Two approaches—via a path or over a pedestrian bridge spanning a carp pond—lead to Aoki's 2,831-square-foot sanctum. Between its triangular, covered terrace and a polygonal, 70-seat chapel is a wedge-shaped volume containing the entry foyer, an audiovisual room, and a waiting area for the bridal couple.

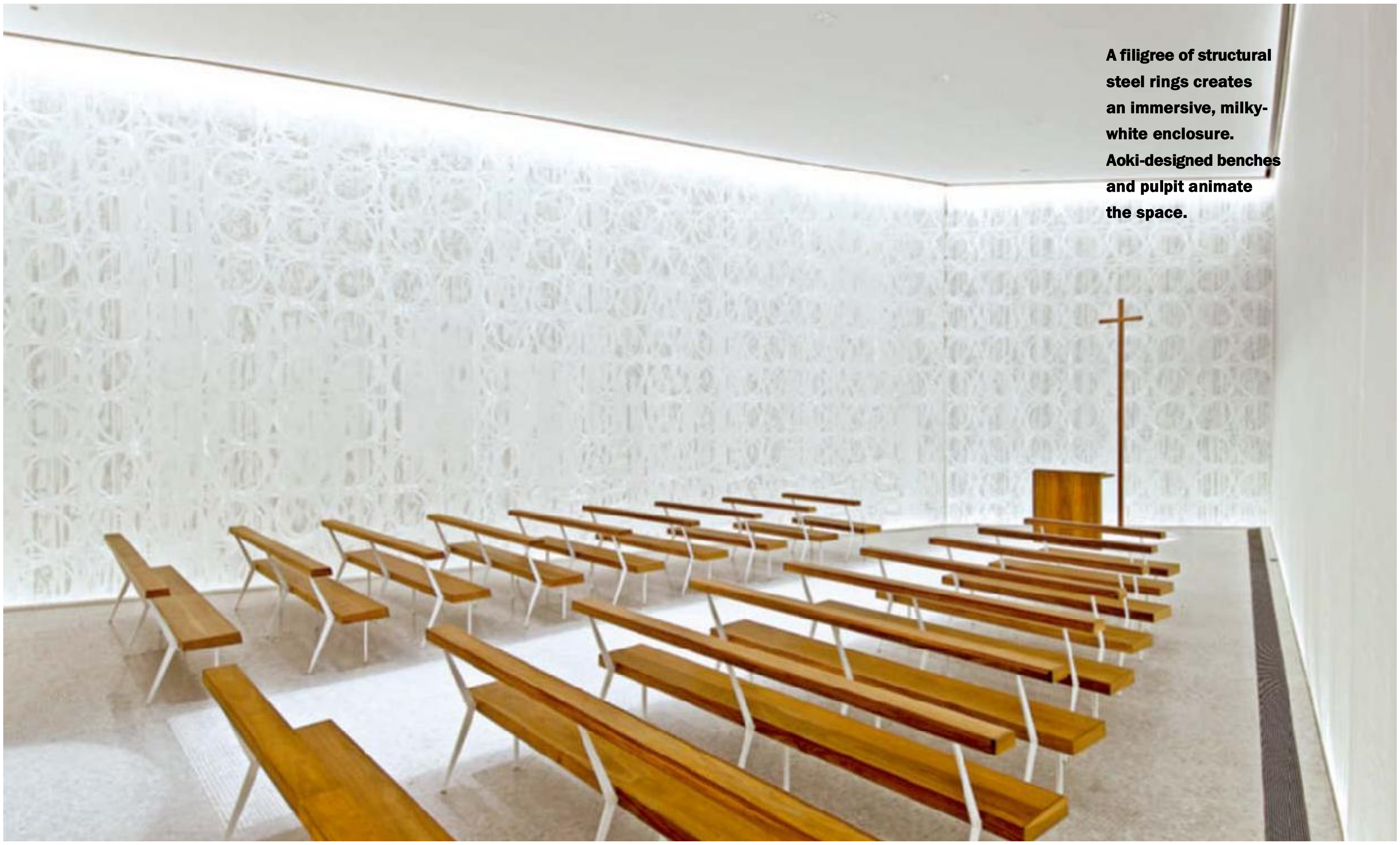
While the sanctuary is oriented toward the hotel entry, the terrace, a perfect isosceles triangle, aligns axially with the footbridge to one side and the foyer entrance to another. Within the foyer, the axis turns, heading right down the aisle to the altar, the focal point of the tapered, but irregularly shaped room.

Though the image of wedding bands seems implicit in the walls' intricate tracery, the structural concept was initially developed for another job that stalled. "I thought the structure would be suitable for this chapel since it needs little ornament," explains Aoki, who designed the system in collaboration with structural engineer Satoshi Okamura. The framework is composed of 1,517 rings, each measuring 2 feet in diameter and assembled in groups of four to form individual structural units, derived from tetrahedral geometry. The resulting 3D unit is capable of heavy lifting without compromising porosity. Even though the seemingly lacy framework eliminated the need for interior columns, slender, square pillars support the other outer walls, and a few concrete walls secure the building against seismic forces.

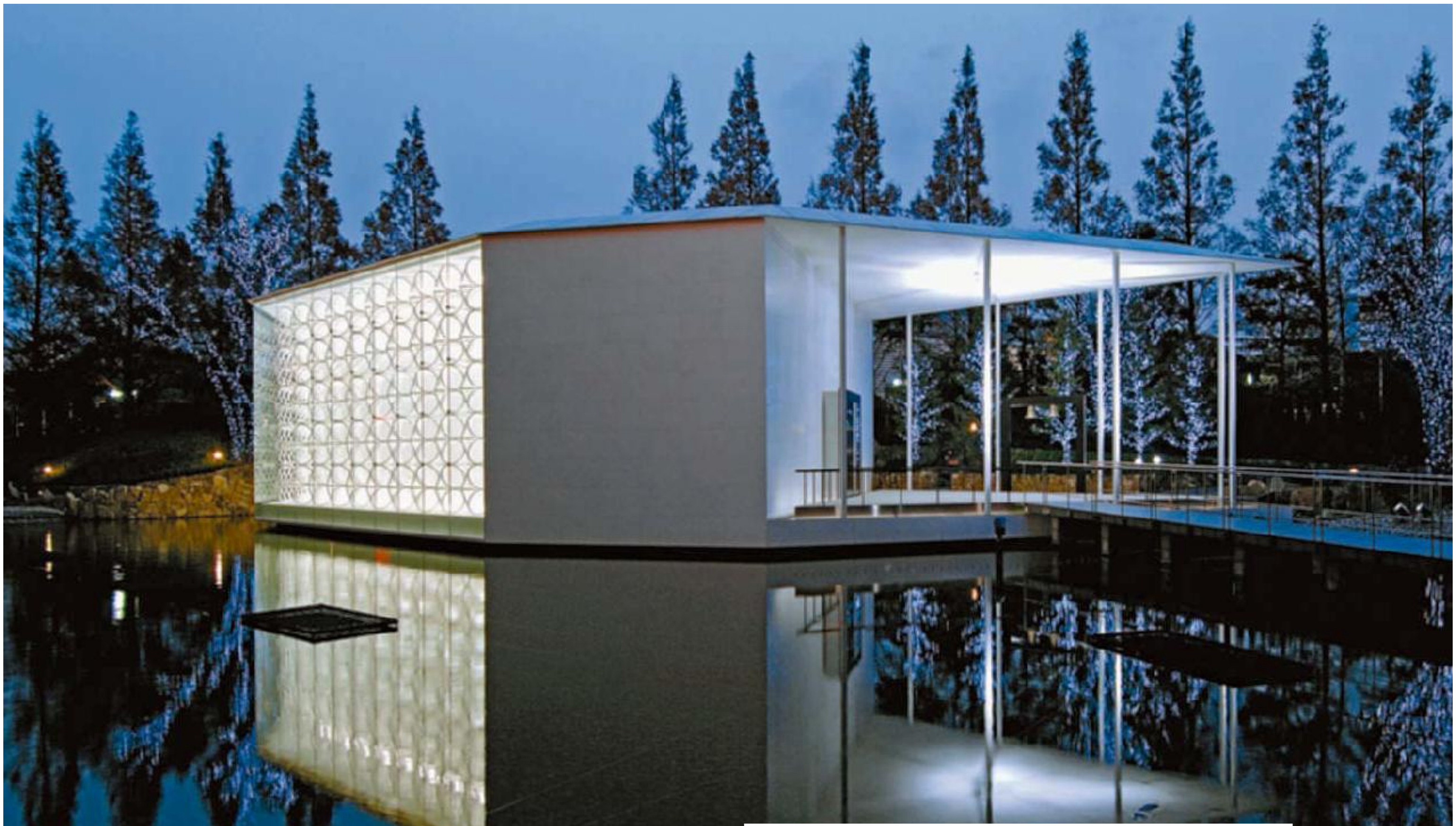
Sheets of white, diaphanous organdy fabric, custom-made by the Nuno Corporation, drape the chapel's 20-foot-high interior. Marble mosaic tiles pave the space, rough-honed in the aisle and smooth in the seating areas. And the steel-and-wood-veneered benches and pulpit, designed by Aoki, are so delicate they seem to float.

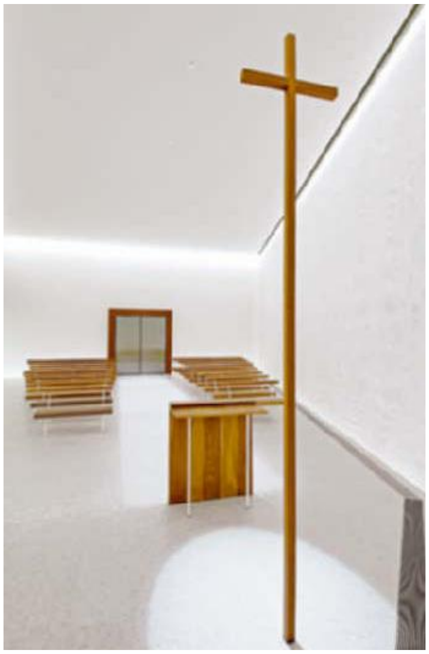
Aoki concedes, "I am not a Christian, so I have no idea how to design a church." But in Osaka, he has made a convincing facsimile. White Chapel is the perfect secular solution, allowing the bride and groom to have their wedding cake and eat it too. ■

Naomi Pollock is RECORD*'s Tokyo-based correspondent.*



A filigree of structural steel rings creates an immersive, milky-white enclosure. Aoki-designed benches and pulpit animate the space.

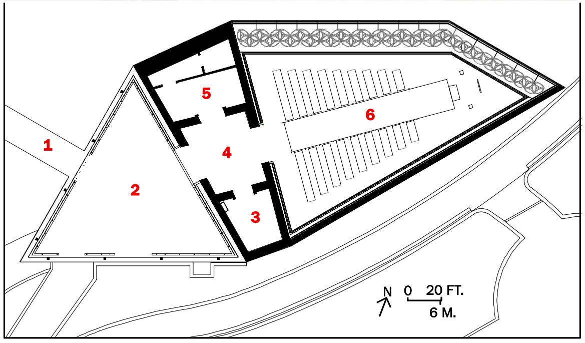




PHOTOGRAPHY: © SERGIO PIRRONE

The translucency of the ring filigree becomes evident at night. The wall is at once ornamental and structural. A bridge spans a carp pond to bring visitors from the hotel to the chapel (right).

1. *Bridge*
2. *Terrace*
3. *Audiovisual*
4. *Foyer*
5. *Waiting room*
6. *Chapel*



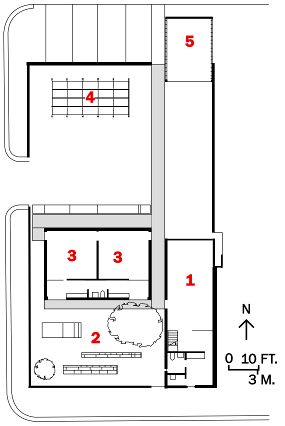
E. 12th Street Studios • Austin, Texas • Elizabeth Alford and Michael Young

By Ingrid Spencer

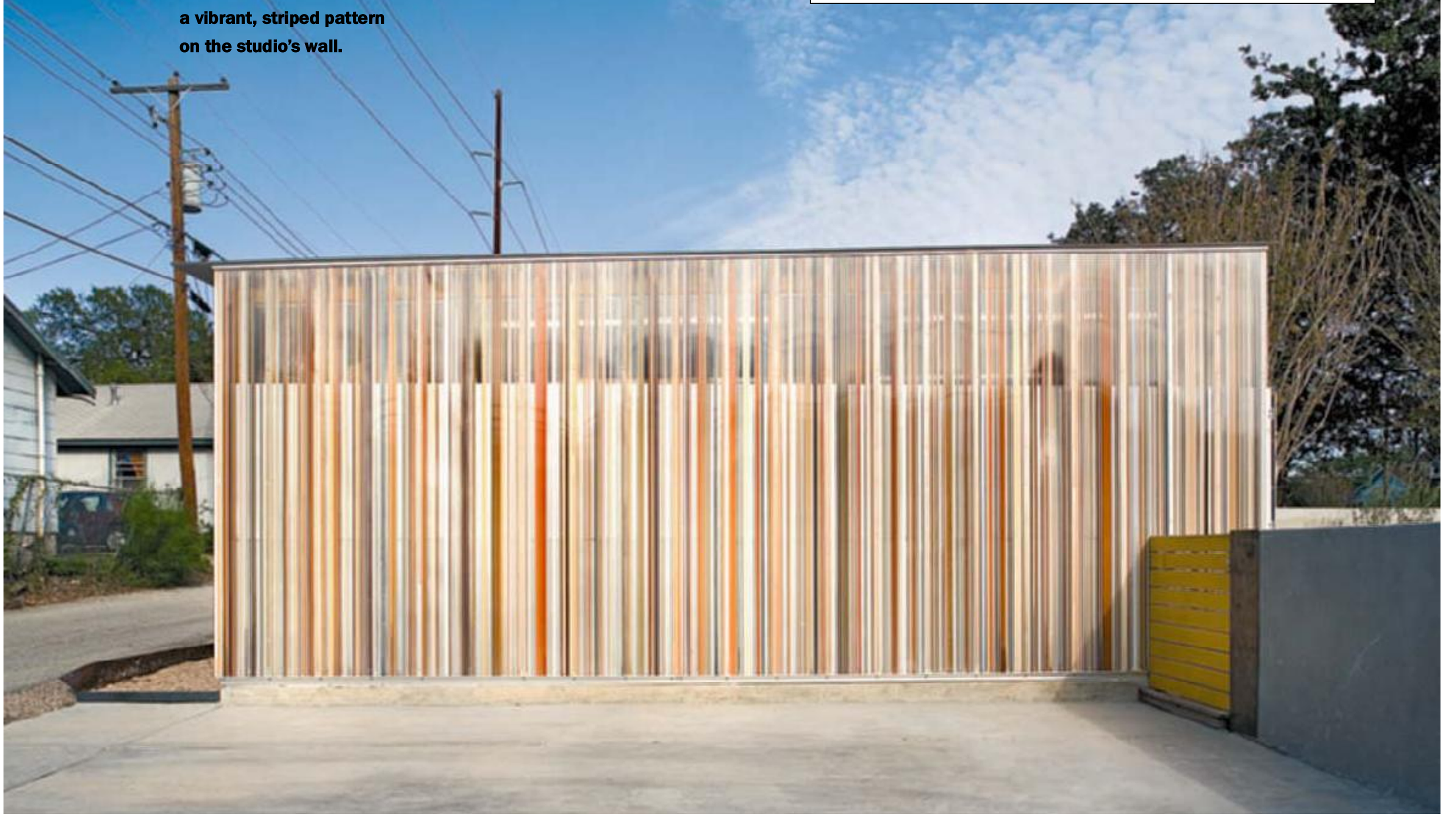
At the time they moved from New York City to Austin, Elizabeth Alford and Michael Young wanted to set up a studio for his painting and their joint architecture firm. They longed for a loft to renovate, like the space they'd left behind in Manhattan's Tribeca neighborhood. "Those buildings just don't exist in Austin," says Alford. Undeterred, they searched and found a corner lot with 8,500 square feet of dilapidated buildings on Austin's ethnically diverse east side, an area that's becoming gentrified. Excited by the opportunity to create what they couldn't in New York—structures from the ground up and landscapes integral to the indoors—they designed a cluster of small buildings and courtyards for their needs, plus additional studios to lease. "We were interested in the identity and tactility of materials," says Alford, "in testing and developing large assemblies on-site before construction."

Concrete walls 5½ feet high wrap the lot's corner, enclosing 2,600 square feet of indoor space and 5,900 square feet outdoors, and opening to the street by a rolling slatted-wood door. The buildings include a 1,400-square-foot painting studio for Young with mezzanine space for the couple's firm, two 400-square-foot artists' studios for lease, a workshop, a shade structure with photovoltaic panels, and two courtyards with sustainable landscapes—all of which became a testing ground for assembling and detailing inexpensive materials for a cost less than $200 per square foot. For Young's studio, built from

Contributing editor Ingrid Spencer is based in Austin, Texas.



1. *Architecture and painting studio*
2. *South courtyard*
3. *Studios for lease*
4. *Shade structure*
5. *Workshop*



Different colored sand poured in between polycarbonate sheets creates a vibrant, striped pattern on the studio's wall.

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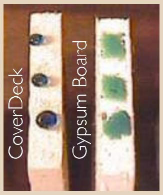

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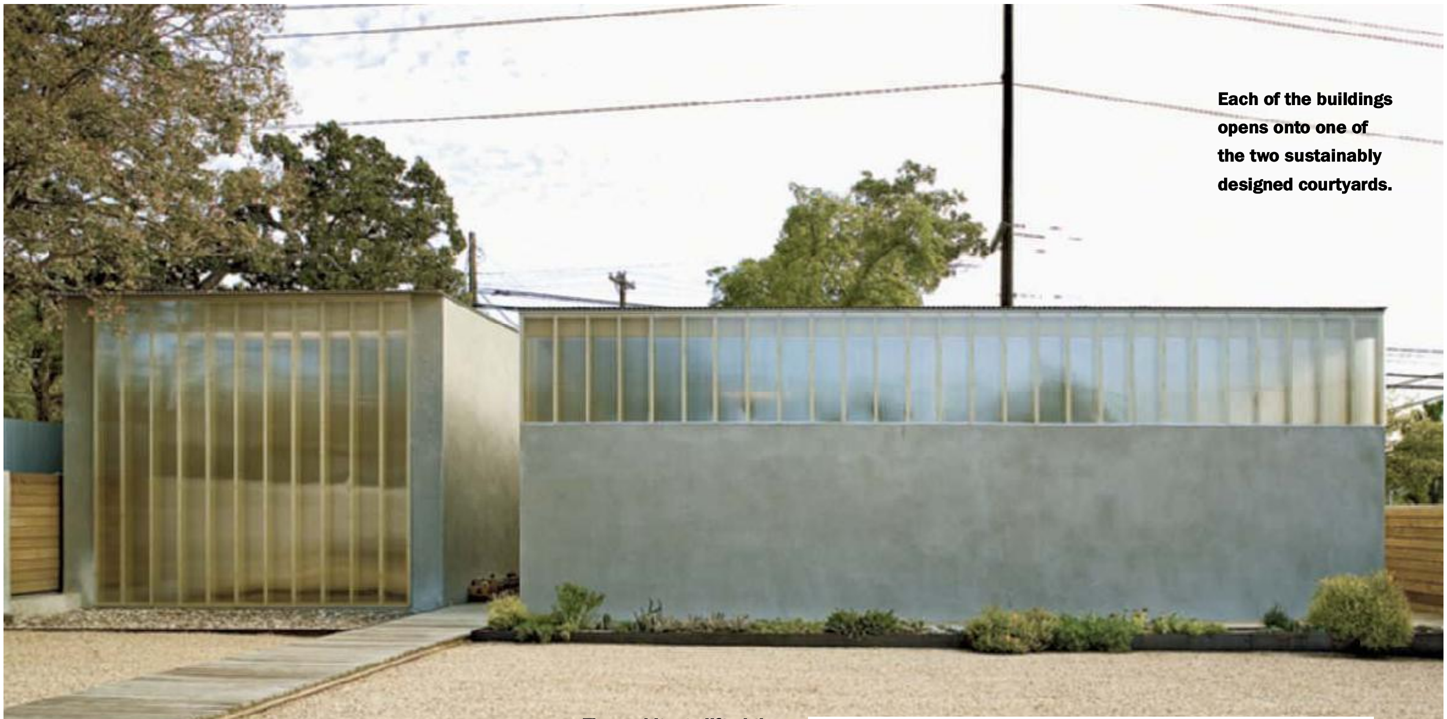
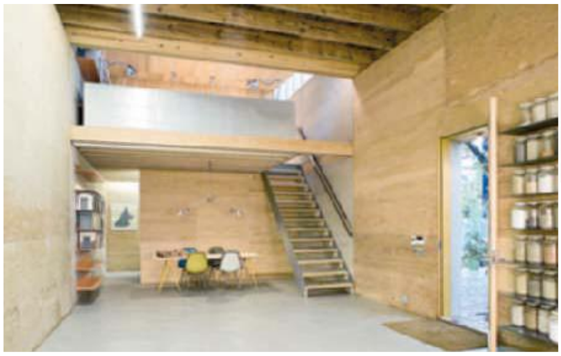
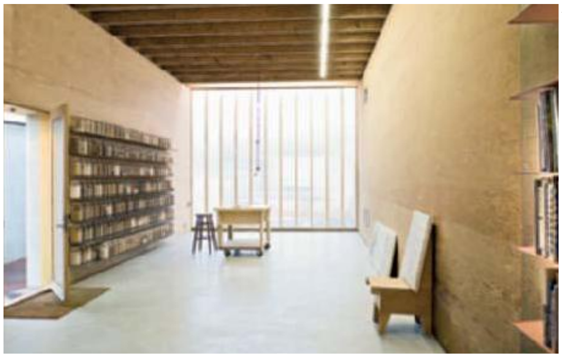


Each of the buildings opens onto one of the two sustainably designed courtyards.

The architects lifted the roof to create a large painting studio and a mezzanine office. Polycarbonate sheets bring in much light.





the remnants of a concrete-block building (previously housing a laundromat, guitar-maker's store, and contractor's shop), Alford and Young lifted and leveled the existing pitched-pine roof, creating clerestory windows and transforming a storage loft into Alford's office. The treated plywood walls have built-in, orange powder-coated steel bookshelves. For the studio's north wall, the couple sandwiched polycarbonate sheets over a structural stick frame, letting in diffuse light. Young, whose art often involves sand, created a striped pattern by filling the voids between the sheets with 1,000 pounds of colored sand. "It insulates, and we like the look," Young says, insisting that pouring the grains by hand into the narrow voids was not as time consuming as it sounds.

The two rental studios open to another sustainable courtyard on the southern side through large, rotating doors (below right). Custom steel planters with a variety of succulents, gravel, and ipé decking along the buildings' perimeter help define the landscape. The resulting effect is a peaceful desert garden—a kind of inverse oasis—in contrast to the unkempt greenery of neighboring yards. In the larger, north courtyard, the shading structure provides an outdoor workplace and a perfect party spot. "This effort has been a real building workshop for Michael and me," says Alford. "It's gratifying that the neighborhood has welcomed it." Next, the duo will develop a mixed-use live/work building on an adjacent property, allowing them to experiment further with materials, dynamic spaces, and sustainable landscapes. ■

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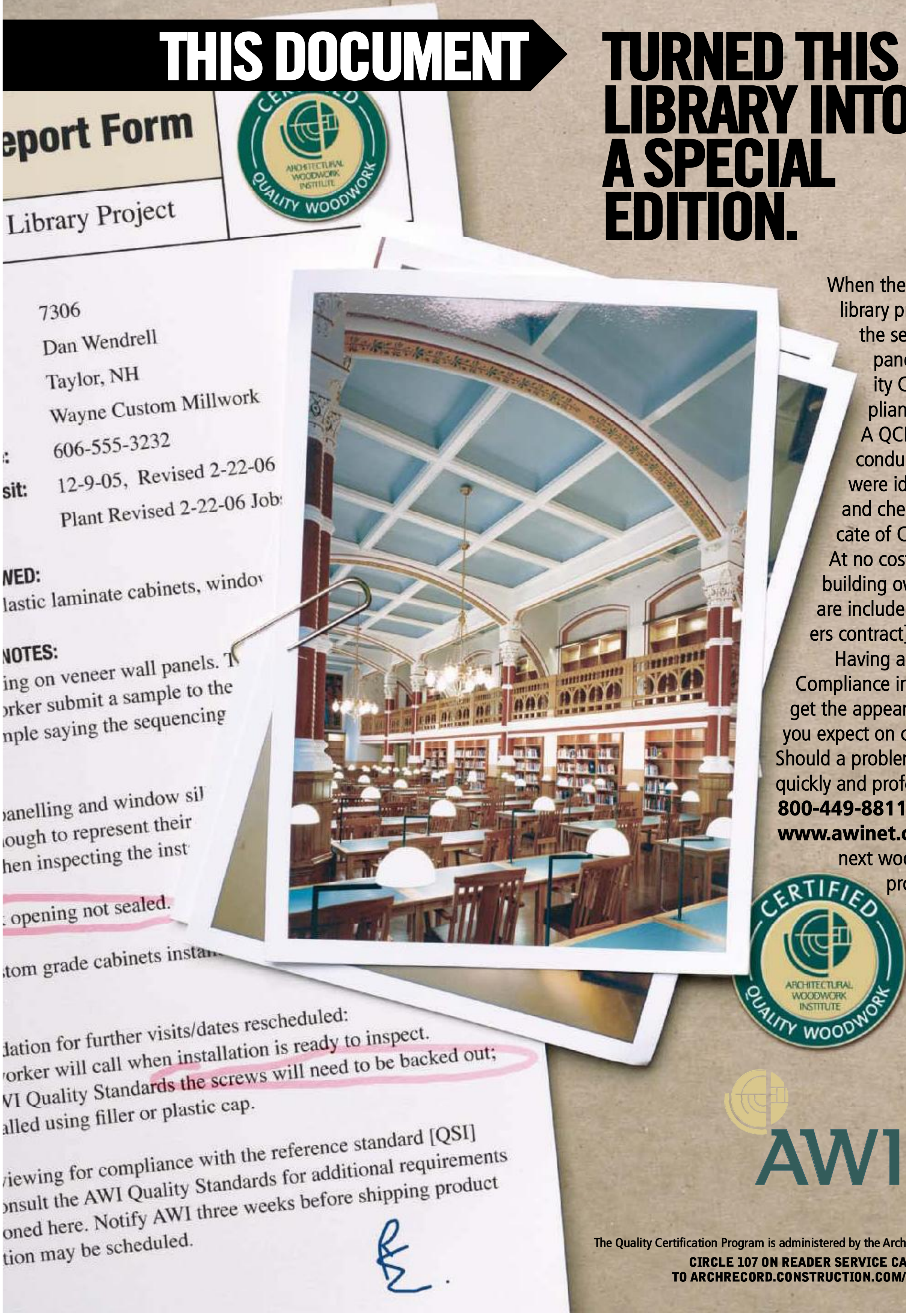

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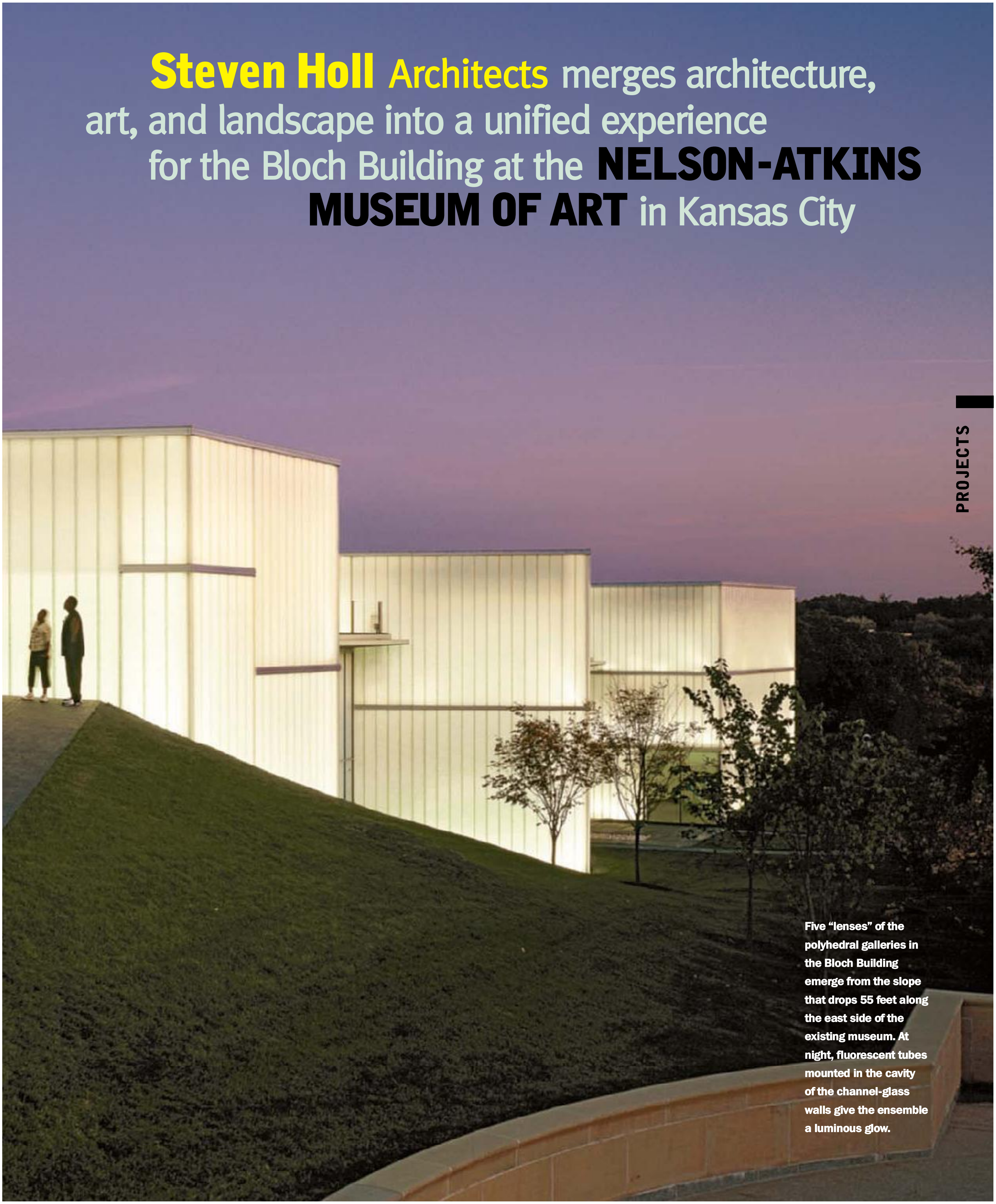
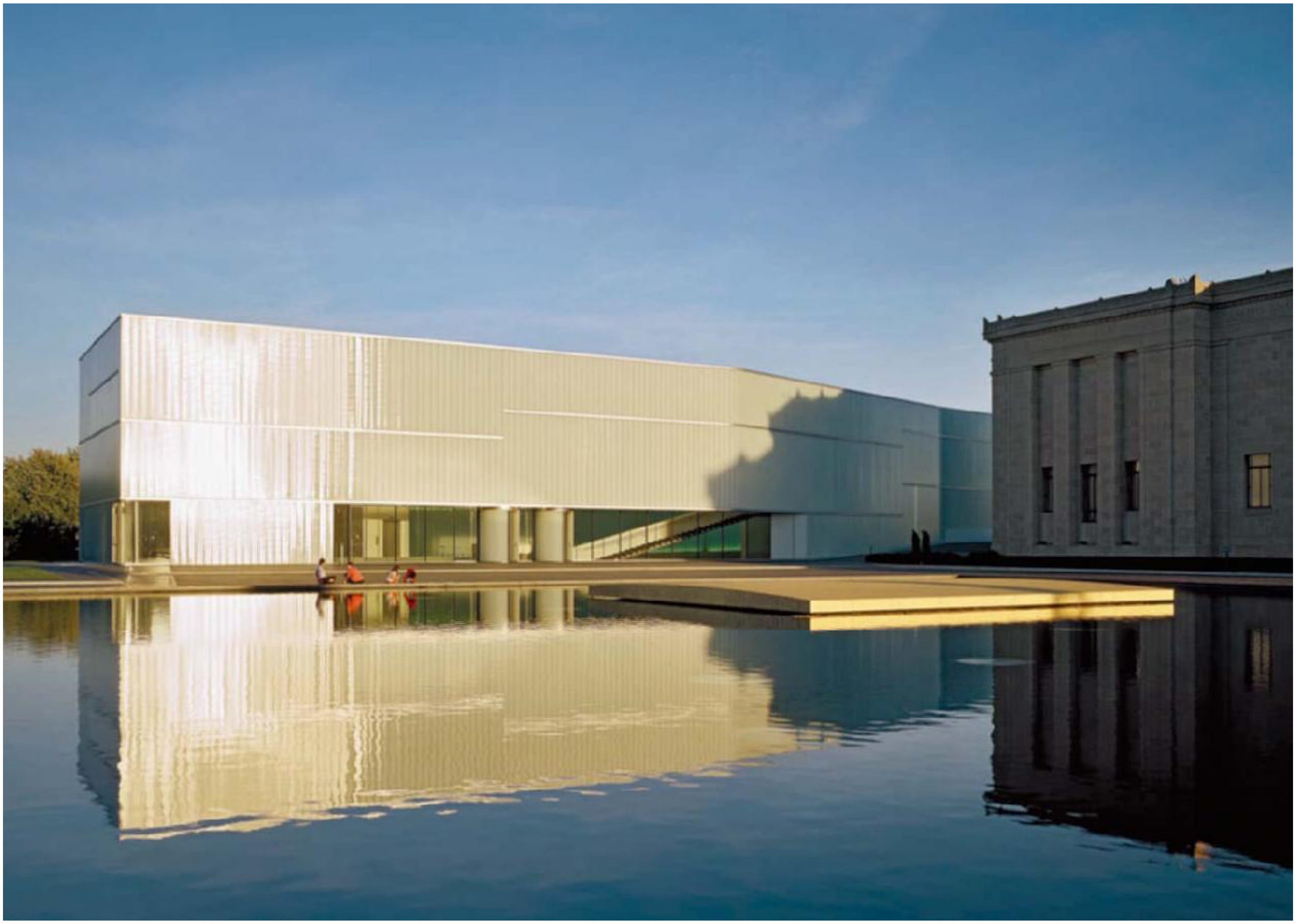
Steven Holl Architects merges architecture, art, and landscape into a unified experience for the Bloch Building at the **NELSON-ATKINS MUSEUM OF ART** in Kansas City



Five “lenses” of the polyhedral galleries in the Bloch Building emerge from the slope that drops 55 feet along the east side of the existing museum. At night, fluorescent tubes mounted in the cavity of the channel-glass walls give the ensemble a luminous glow.



Near the entrance to the Bloch Building (above), Steven Holl and artist Walter de Maria collaborated on the design of the reflecting pool in front of the existing building. From the southeast (below), the new wing can be seen alongside the 1933 building.

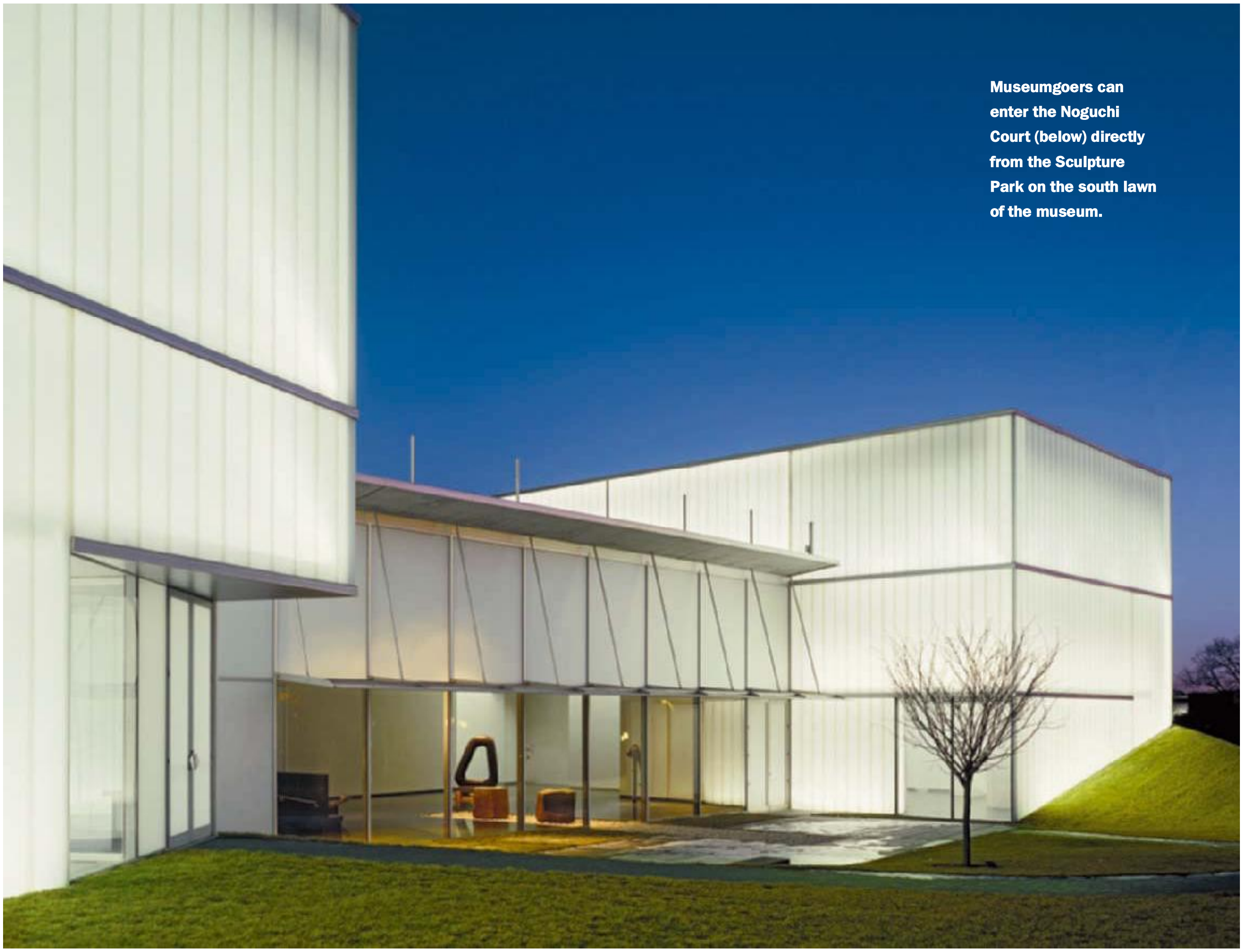
PHOTOGRAPHY: © ROLAND HALBE, EXCEPT ANDY RYAN (THIS PAGE, BOTTOM)

By Suzanne Stephens

During construction, the reaction to the Nelson-Atkins Museum's Bloch Building ran the gamut from irascible to irate. According to the museum's intrepid director, Marc Wilson, the Kansas City public had liked Steven Holl Architects' design well enough when viewing it as an architectural model. "But all models are tiny," Wilson explains. It was another thing when the citizenry got a glimpse of the channel-glass-clad structures, coming out of the muddy turf atop the 840-foot-long linear underground galleries. Winding down the eastern slope, hard by the Classically styled main building, all five polyhedral forms looked like so many icebergs threatening to sink the Titanically proportioned limestone building designed in 1933 by Wight and Wight.

Observers dismissed Holl's "lenses," as he calls the irregularly shaped geometric light monitors, as shipping containers. Such ire reportedly unnerved even the new building's lead donor, Henry Bloch (founder of H&R Block), for whom the 165,599-square-foot addition is named.

Now Holl and Wilson can feel fully vindicated. The building opened in early June with great fanfare and overwhelmingly adulatory press. Steven Holl, AIA, his partner Chris McVoy, and the local architects Berkebile, Nelson, Immenschuh, McDowell (BNIM), under the leadership of Casey Cassias, AIA, can now rightfully enjoy the credit due after



Museumgoers can enter the Noguchi Court (below) directly from the Sculpture Park on the south lawn of the museum.

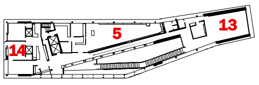
eight years of grueling effort.

True, museums usually enjoy an intense if too brief honeymoon when they first open. This is before leaks occur, or before visitors and curators start to complain that the architectural extravaganza overwhelms the art. For now, not even a storm has blown in to test the claim that the glass can withstand winds up to 135 miles an hour. On top of that, the permanent collection of contemporary art fits into the spaces smoothly and strikingly. And while neighborhood residents thought the shipping containers didn't quite fit in with the symmetrical, Ionic-columned temple of art, the lenses, luminous with interior lighting at night, glinting in the sun by day, are looking a lot better amid the 50,000 square feet of grass-planted

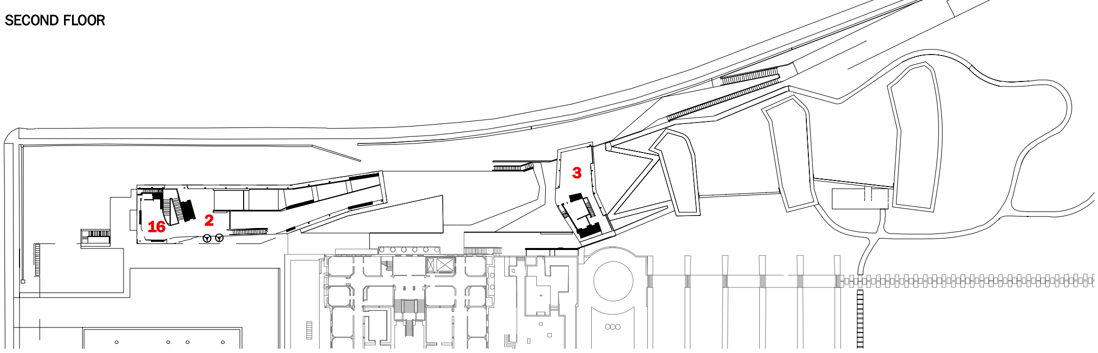
---

Project: *Bloch Building, Nelson-Atkins Museum of Art, Kansas City, Mo.*
Architect: *Steven Holl Architects—Steven Holl, AIA, principal; Chris McVoy, partner in charge; Martin Cox, Richard Tobias, project architects*
Architect of record: *Berkebile, Nelson, Immenschuh, McDowell (BNIM)—Casey Cassias, AIA, principal; Greg Sheldon, AIA, senior project architect; Matthew Porreca, AIA, Rick Schladweiler, AIA, project architects*
Structural engineer: *Guy Nordenson and Associates*

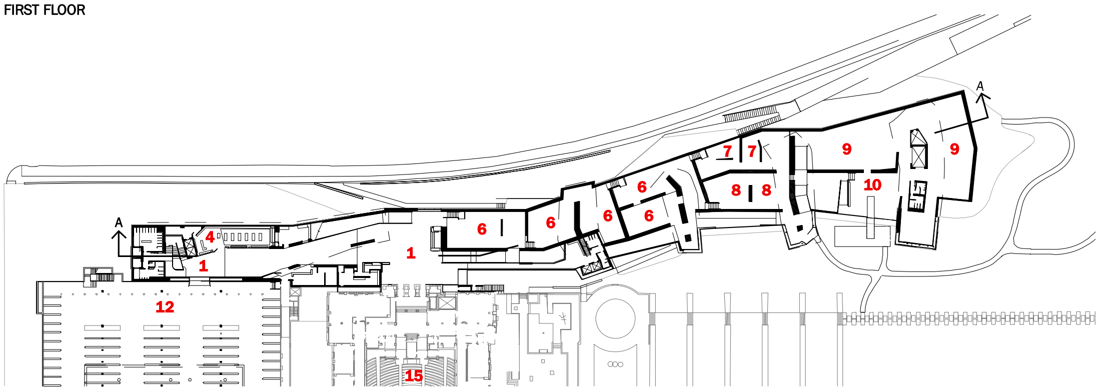
The 22-acre Kansas City Sculpture Park, designed in 1989 by landscape architect Dan Kiley and Jaquelin Robertson of Cooper Robertson, lies to the south of the old museum (right). Part of a public/private enterprise between the museum, the city, and the Hall Family Foundation, the park merges with the grassy lawn and roofs of the new wing.



SECOND FLOOR



FIRST FLOOR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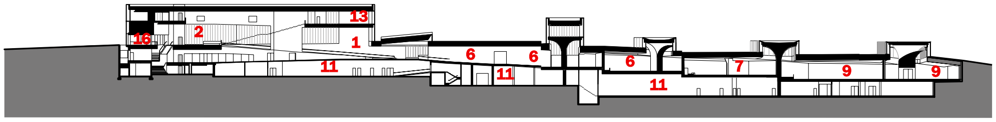
LOWER FLOOR

1. *Lobby*
2. *Upper lobby*
3. *Event room*
4. *Museum store*
5. *Library*
6. *Contemporary Art*
7. *Photography*
8. *African Art*
9. *Special exhibitions*
10. *Noguchi Court*
11. *Art service*
12. *Parking*
13. *Multipurpose room*
14. *Executive offices*
15. *Auditorium*
16. *Café*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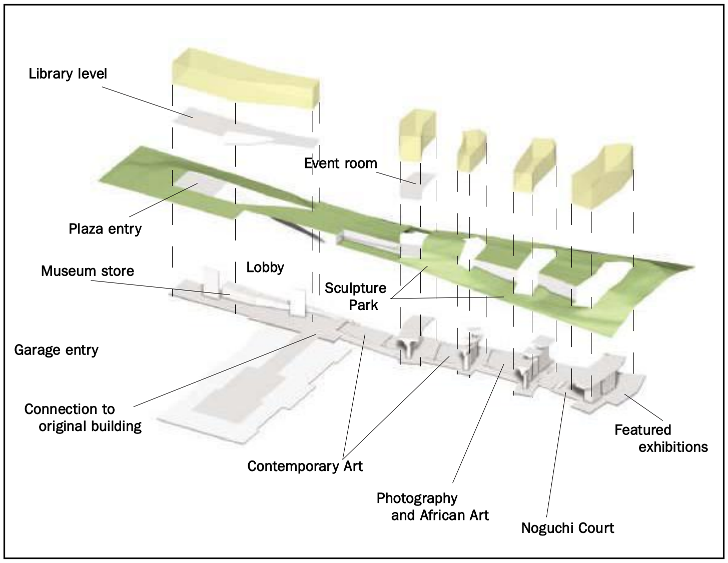
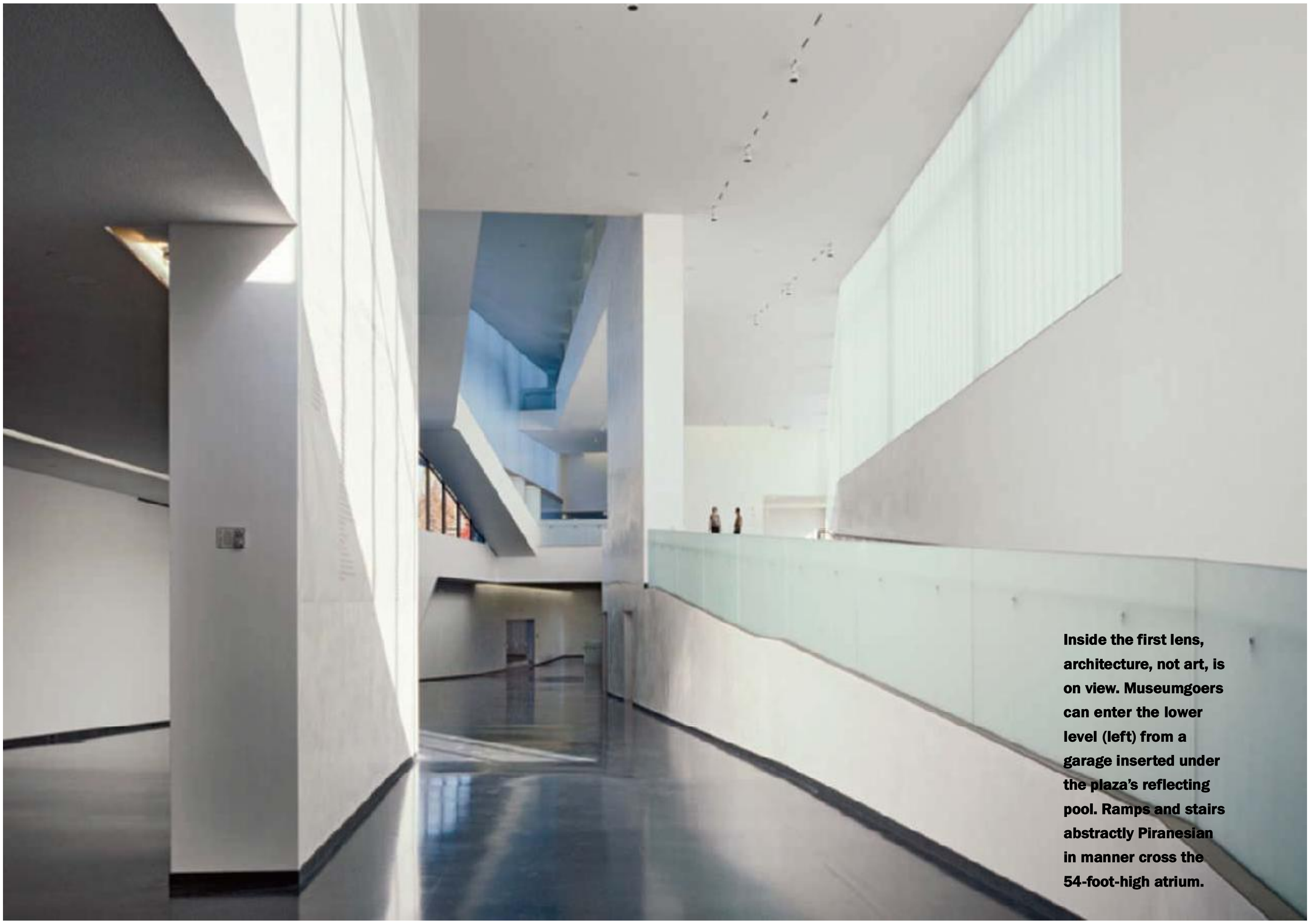

Library level
Event room
Plaza entry
Museum store
Lobby
Sculpture Park
Garage entry
Connection to original building
Featured exhibitions
Contemporary Art
Photography and African Art
Noguchi Court

Light suffuses the subterranean levels of the galleries, including the first lens (right), where recycled-glass aggregate gives a sheen to the floors. Visitors can check coats and go into the museum store before going upstairs. An exploded axonometric (left) shows the relationship of the various elements in the new wing, from the first lens at the far left to the last one, at far right.



Inside the first lens, architecture, not art, is on view. Museumgoers can enter the lower level (left) from a garage inserted under the plaza's reflecting pool. Ramps and stairs abstractly Piranesian in manner cross the 54-foot-high atrium.

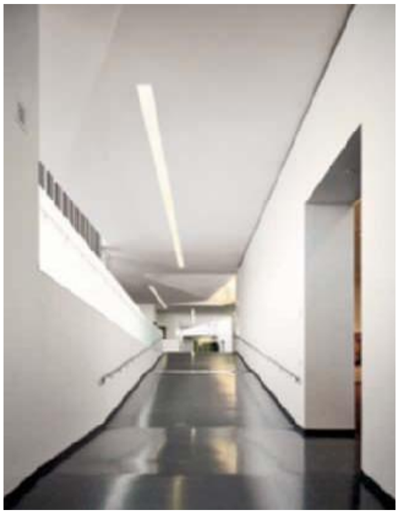
roofs connecting them. Indeed, the integration of art, landscape, and architecture creates a dynamic whole where visitors—including this observer—are bowled over by the experience of meandering through and around the exterior and interior spaces.

Experience is the key word, for Holl has often maintained that the experiential quality of architecture is its most significant aspect. He refers to the perceptual unity where the optical sense combines with the haptic, or sense of touch (which enables you to "feel" in your mind's eye the shape of an object by simply looking at it), which in turn is enriched by the kinesthetic sense conveyed by your limbs—muscles, tendons, and joints—in movement. You need space, time, and architecture to bring all this into play: As the museumgoer walks through the Bloch Building, he or she is aware of the changing spaces, elongated and flowing into one another at one moment or more enclosed and intimate in another; of the surface modulation of planes that form the walls, ceilings, and floors; of daylight admitted through clear and translucent glass and bounced off of smoothly polished surfaces, such as the hand-troweled plaster walls. The combined sources of natural and electrical light also endow the recycled-glass-aggregate floors in the public areas with a soft sheen, and pick up the dark luster of the stained end-grain oak blocks in the galleries.

The most visible "lens" above ground is the first one, which does not contain any art galleries—or even art: Architecture takes over in the new wing's main lobby, 54 feet high, which is accessible from both the plaza on the north side of the building as well the parking garage on the level beneath it. An Aaltoesque ramp and a knife-edge stair dominate the space—the ramp leading to the lower level, and the stair seeming to float up to the conference room, walnut-paneled library, and director's office above.

Within the entire addition, Holl devised a *promenade architecturale* in the Corbusian sense, that is, a processional path that begins in the first lens as you are drawn by the downward tilt of the ramp through the museum's atrium. As you descend into the galleries in an angular sequence, you come to levels where you can pause and leave the trajectory. One such level is a lobby where the below-ground entrance to the 1933 building takes you to a new stair leading to the existing museum.

If you proceed on through the new wing, you are pulled into the contemporary art, photography, and African art galleries, where your eye is continually directed on diagonals and across perspectives to artworks of varying sizes. Here you find that the galleries, bathed in a soft light, do much to counter the feeling of being embalmed in a subterranean netherworld. Tall, concave vaults, 27 to 34 feet high, created by the T-shaped structural



The gallery walk between connecting lenses receives light from the west (left). The balustrade of partially acid-etched glass helps refract light, as do the hand-troweled plaster surfaces of the interior walls. Light is deflected around coved fins of the T-shaped, thick walls (which contain mechanical, electrical, and structural elements) in the galleries, such as the one devoted to African art (right).

walls with curved tops, bounce light softly down from clerestories, an effect that seems to owe much to the scupperlike light monitors of Josep Lluis Sert's Fondation Maeght in Saint-Paul de Vence, France (1964), as well as the slotted barrel vaults of Louis Kahn's Kimbell Art Museum, in Fort Worth (1972). Secondary concave projections (called "flutters"), which resemble giant abstractly rendered acanthus leaves, refract light as well.

Farther along the gallery walk, you come to the Noguchi Court, where an expansive window wall looks out on the lushly terraced 22-acre Kansas City Sculpture Park, occupying the south lawn of the museum. Here Holl generated a strong visual connection to the outside through a swath of rocks that extends from the Noguchi Court's interior straight through the window wall to an outside court. (Doors also offer access outside as well as in—as they do in many places in this admission-free museum).

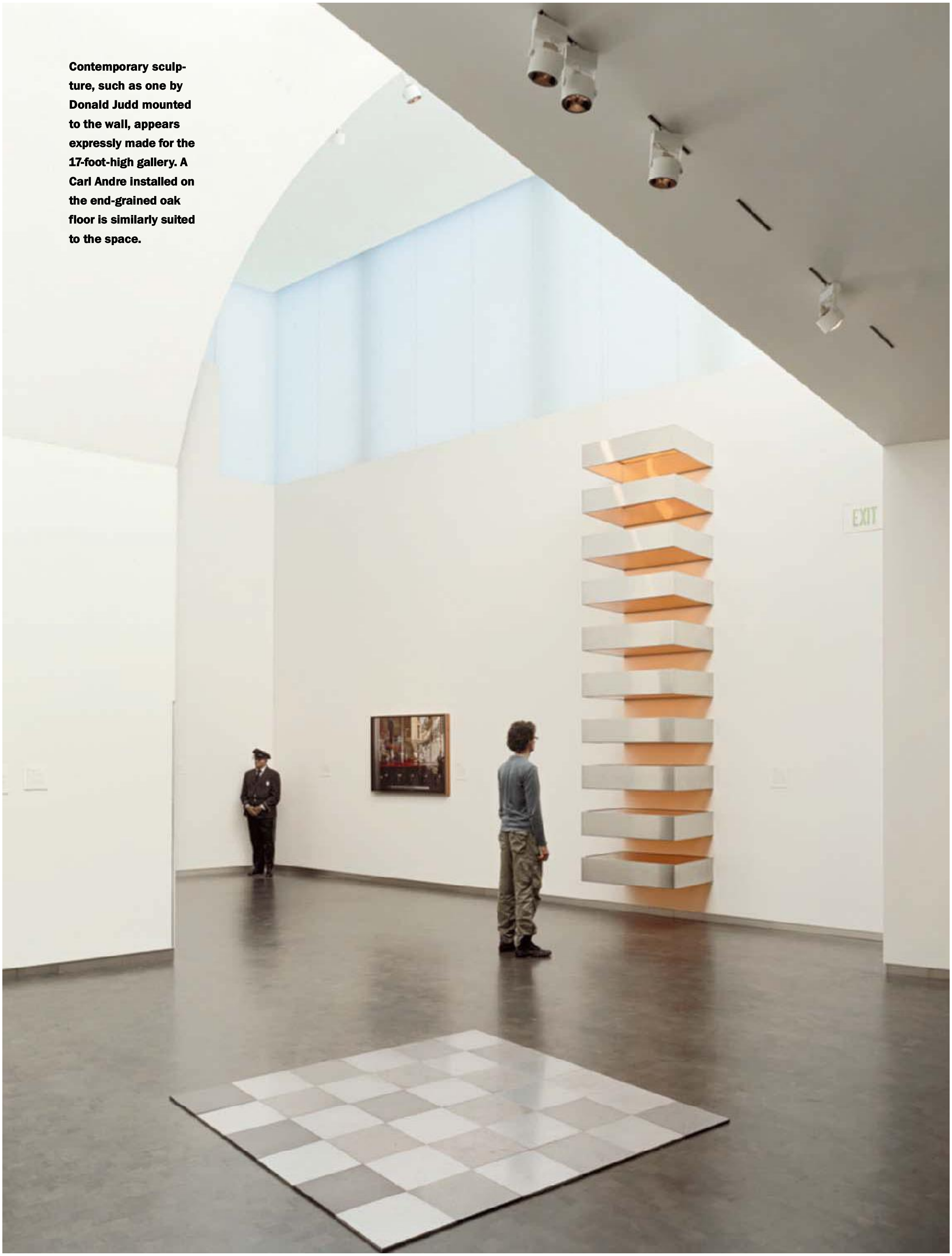
The Noguchi Court forms something of a terminus for the processional, although galleries for changing exhibitions lie beyond in lens five. Leaving the building to walk around the exterior of the lenses, you notice the sometimes low-key, sometimes dramatic interplay of light on channel-glass walls at various perspectives and during various times of the day. The cladding, composed of 6,000 double-interlocked U-profile planks of tempered low-iron glass, 16 inches wide, contains translucent capillary insulation between its inner and outer surfaces. This wall is separated from a single layer of acid-etched, low-iron, high-UV laminated glass by a 3-foot-wide catwalk accessible to service personnel. Fluorescent tubes placed within the pressurized air cavity illuminate the structures at night.

Owing to a solar texture on the outer surface of the channel glass and the sandblasted inner face of this outer wall, the exterior takes on an opalescent sheen in sunlight, rather like chantung silk. Although it sometimes appears flat in even light, as exterior conditions change, a glinting moiré pattern emerges. While vertical joints composed of silicone tubes and sealants disappear from view, Holl designed the aluminum sills and headers for the planks as staggered horizontal lines: He didn't want them to read as edges of the floor plates, but to reaffirm the overall asymmetrical theme.

The asymmetrical addition doesn't look as if it was simple to build. And it wasn't. Some 650 drawings were needed, not including 300 perspectives to predict vantage points of museumgoers. Although the construction figure is given as $94 million, the overall budget, which includes a comprehensive restoration of the existing Nelson-Atkins by BNIM, plus a parking garage, came to $200 million.

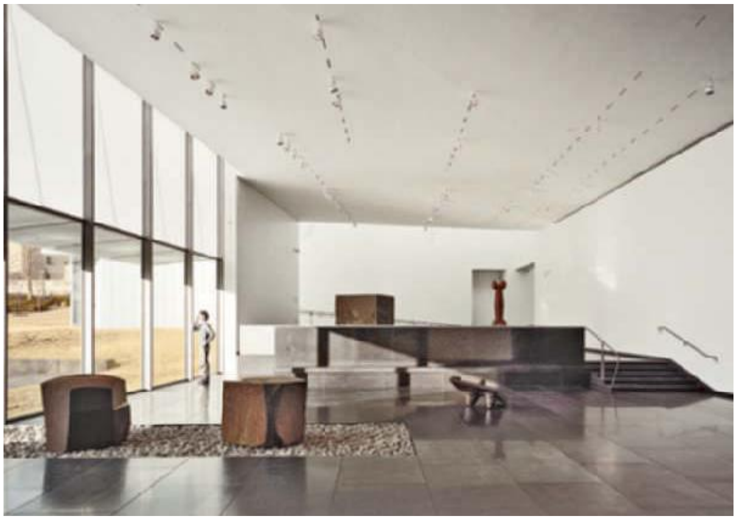
The addition sits on poured-in-place concrete foundations. The level under the galleries is devoted to storage and loading docks. To keep the glass walls free of columns, Holl, in consultation with structural engineer Guy Nordenson, worked out a steel framing system that pushes the structure to the center. In the first lens, a large truss snakes across the length of the space, like an asymmetrical spine. Holl, McVoy, and the team have exposed the truss elements at the top so that part of the structure could be legible. From the truss, part of the roof cantilevers west over the glass window wall, which is suspended from it. The basic structure of the lenses for galleries is contained within T-wall units, which are thick enough to carry mechanical and electrical services. In these T-walls, a series of vertical trusses branch out as horizontal girders supporting the roof or an upper floor. The team stabilized this cantilevered structure by embedding rods in the channel glass's cavity walls, like cables and ropes on a boat.

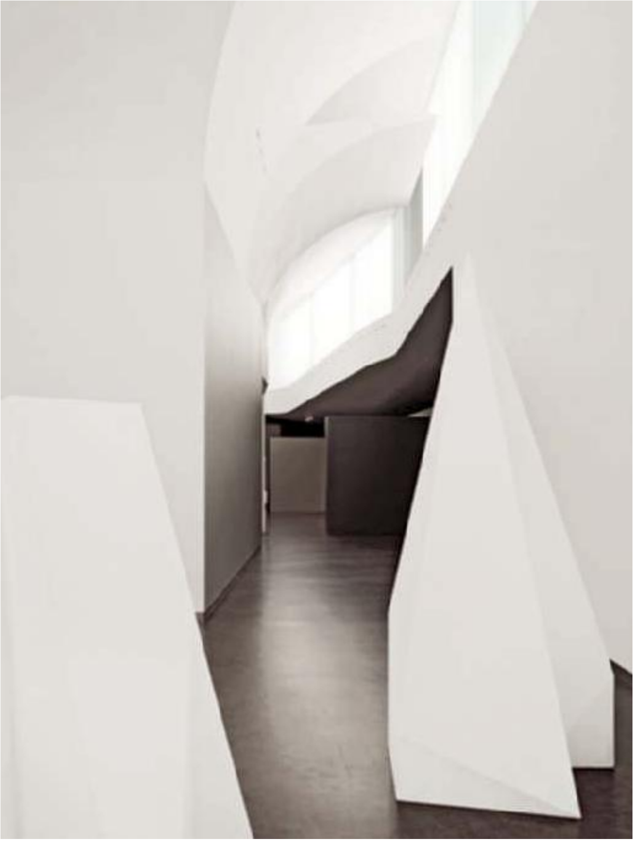
Clearly, the museum's trustees and selection committee took a risk with Holl's innovative and structurally ambitious scheme. That the Nelson-Atkins was already famous for its collection of Chinese art gave them confidence—the museum didn't depend on architecture as the only draw. At the same time, Marc Wilson had been at the museum long enough—34 years, including 25 as the director—to know the city, the



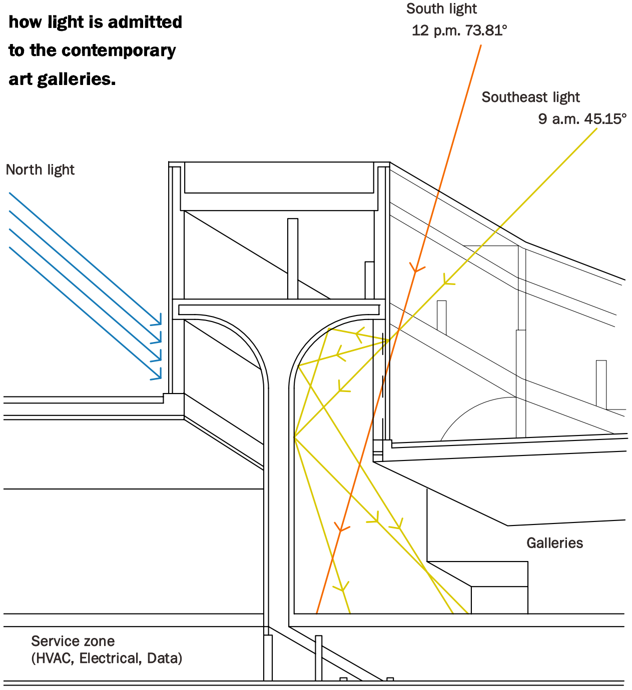
Contemporary sculpture, such as one by Donald Judd mounted to the wall, appears expressly made for the 17-foot-high gallery. A Carl Andre installed on the end-grained oak floor is similarly suited to the space.

The Noguchi Court (below), devoted to the sculpture of Isamu Noguchi, is located between the fourth and fifth lens structures. Black polished granite is used for the floor and bench. In the fifth lens, a sculpture by Sol Lewitt is appropriately positioned below the coved fins of the skylight (right).





In the second lens building, an event space sits atop the T-wall. The diagram below illustrates how light is admitted to the contemporary art galleries.



BREATHING T DIAGRAM

public, and the donors all extremely well and to be able to handle controversy. Holl, who had daringly gone against the grain to place the addition to the east of the museum, when his competitors generally put their schemes in front of the north facade, won the backing of a sophisticated selection committee in 1999, which included the late J. Carter Brown, William Lacy, and Ada Louise Huxtable.

Nevertheless, a laundry list of complaints could crop up: Illuminating five buildings at night is not very "green"; the silicone joints may fail long before the glass; and the rest of the Bloch Building needs a lot of glass cleaner and floor polish. Clearly, the old building and the new have little contextual relation—Holl's inspiration comes from the landforms and sculpture of the south lawn. In this case, the contradiction between the 1933 and the 2007 architecture works, but only through embracing antinomy: light to solid masses; asymmetrical to symmetrical plans; fragmented, nonhierarchical to centralized and hierarchical spaces.

Furthermore, there are no places for an indoor Richard Serra (this era's measuring stick for gallery sizes). Indeed, the ratio of new circulation space to new gallery space seems about 50:50, so that the museum could run out of places to install art. While the art-free first lens offers a "party hall," so necessary when staging exhibition openings, one could argue that the central Kirkwood Hall of the 1933 building provides a very elegant space for just this sort of thing. All of which is to say that, while this addition is brilliant—succeeding provocatively and magnificently in the integration of art, landscape, and architecture; of contrast, contradiction, and dissonance; of architecture raised to an artistic level—it is not a solution for every museum. It is unique in the true sense of the term. ■

For sources, see page 124.

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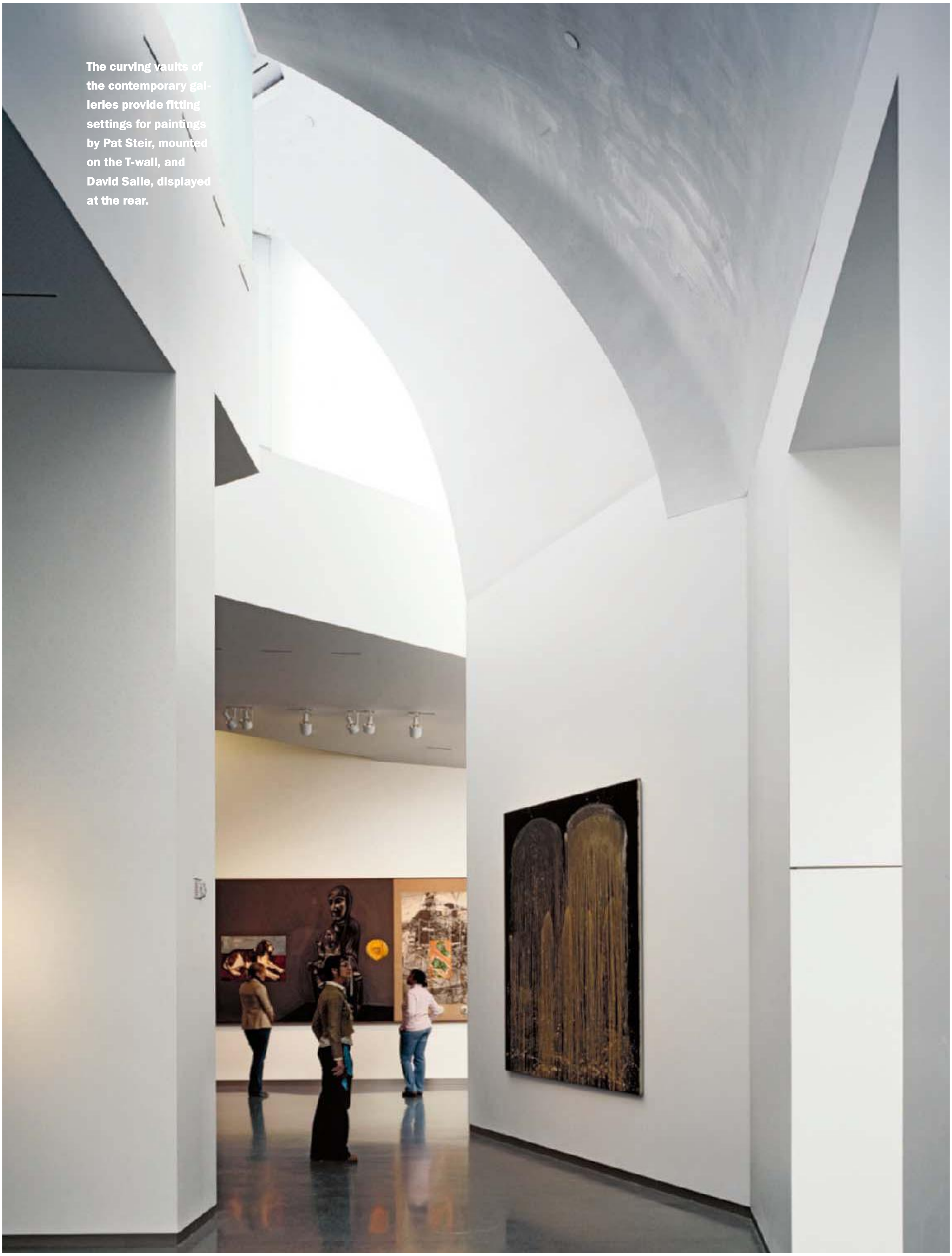
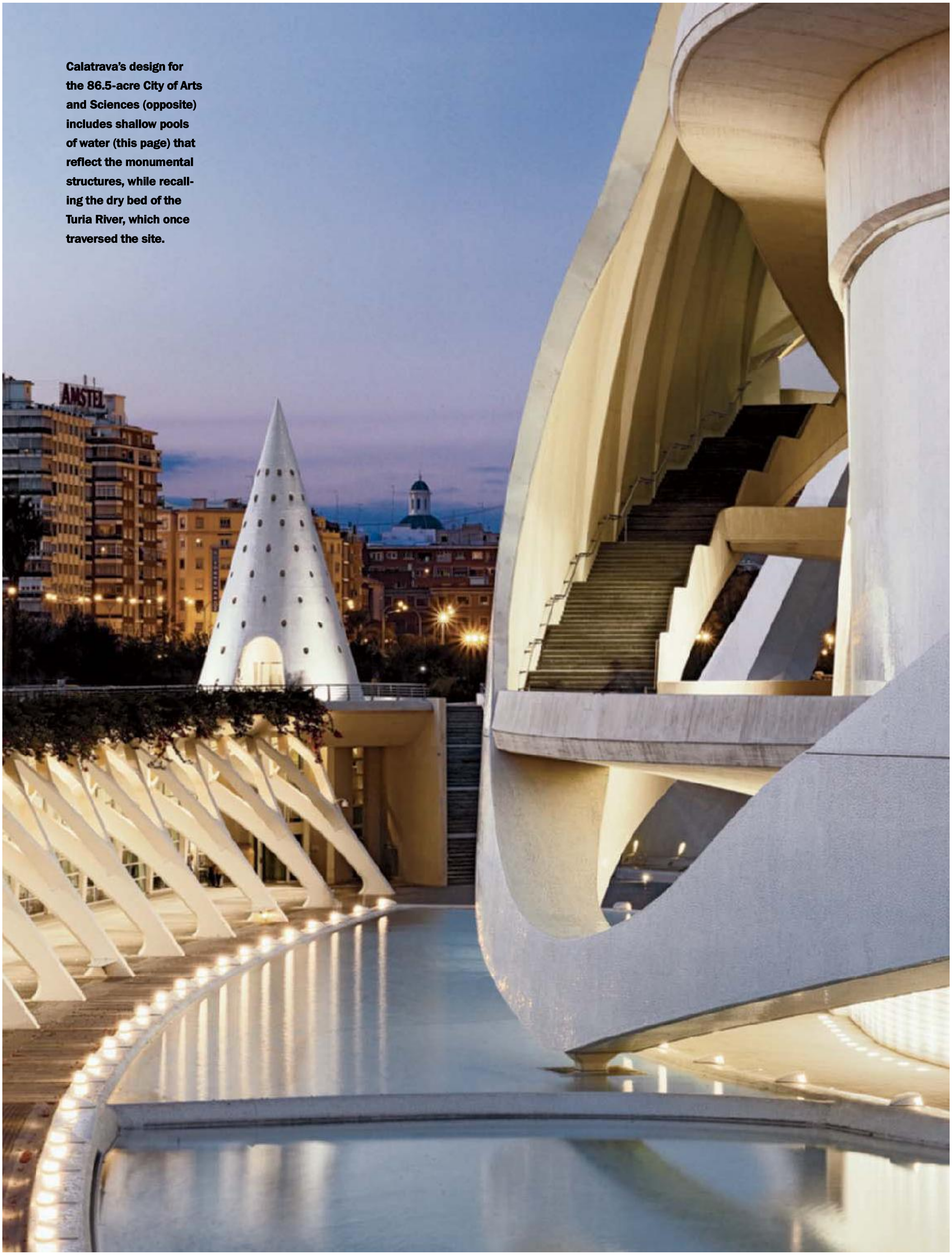
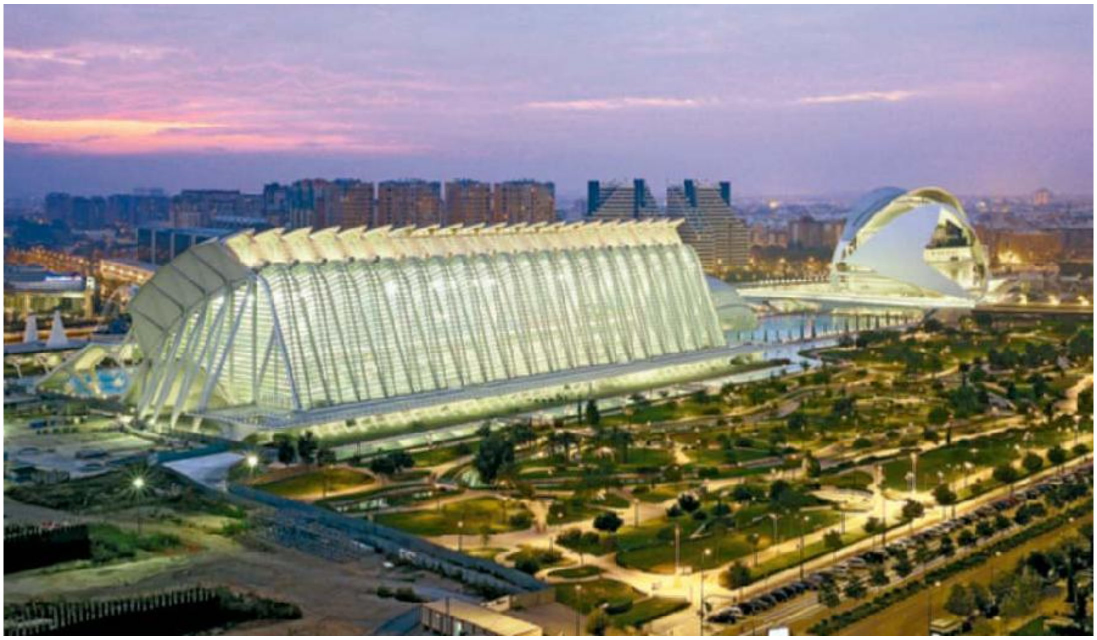
The curving vaults of the contemporary galleries provide fitting settings for paintings by Pat Steir, mounted on the T-wall, and David Salle, displayed at the rear.





Calatrava's design for the 86.5-acre City of Arts and Sciences (opposite) includes shallow pools of water (this page) that reflect the monumental structures, while recalling the dry bed of the Turia River, which once traversed the site.

In Santiago **Calatrava's** City of Arts and Sciences, in Valencia, the **REINA SOFÍA PALACE OF THE ARTS**, an opera house, finally touches down



PHOTOGRAPHY: © ALAN KARCHMER

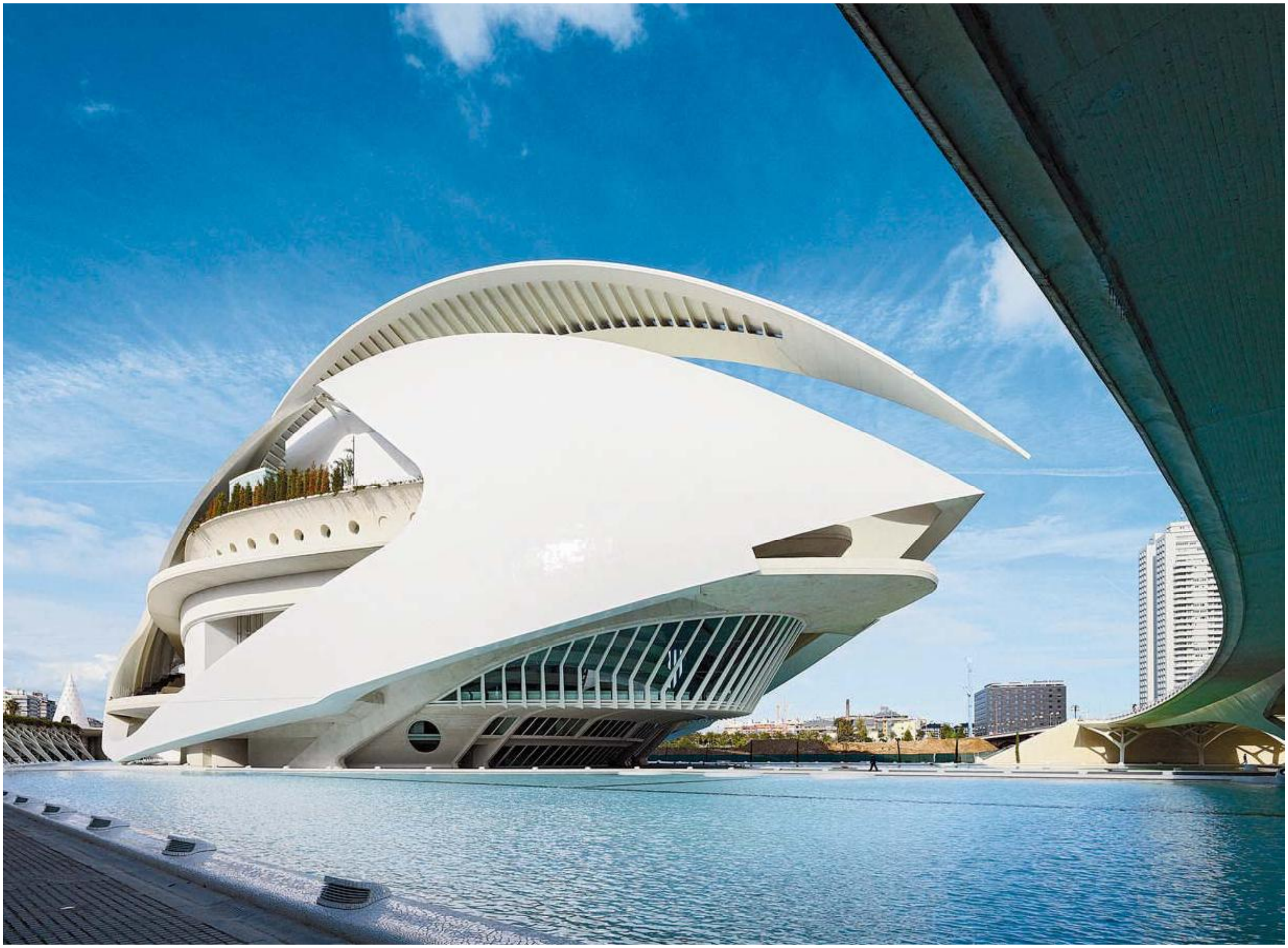
Aspiring to give Valencia, Spain's third-largest city, cultural clout and a tourist magnet rivaling Frank Gehry's museum in Bilbao, the regional government set out to develop an 86.5-acre site on a dry riverbed, midway between Valencia's old section and its coastal district. In 1991, architect and engineer Santiago Calatrava, a native son of the city, won the competition for a telecommunications tower on that land and soon after gained the commission to develop the entire City of Arts and Sciences there. Governmental changes in 1996 prompted the decision to create the Reina Sofía Palace of the Arts (Palau de les Arts), to include an opera house, at the site's western end, in place of the planned telecommunications tower.

Ten years later, the $454 million, 475,000-square-foot palace, one of the last pieces in the grand scheme, finally reached completion. In Calatrava's surreal "city" of gardens, reflecting pools, and all-white, structurally exuberant buildings of steel, glass, and concrete, the monumental opera house stands along the main axis, linking it across the vast site to the Hemispheric Planetarium/IMAX theater of 1998 (an iconic structure evoking a human eyeball, socket, and lid, all set over a 260,000-square-foot "mirror" of water) and longitudinal Prince Felipe Science Museum of 2000.

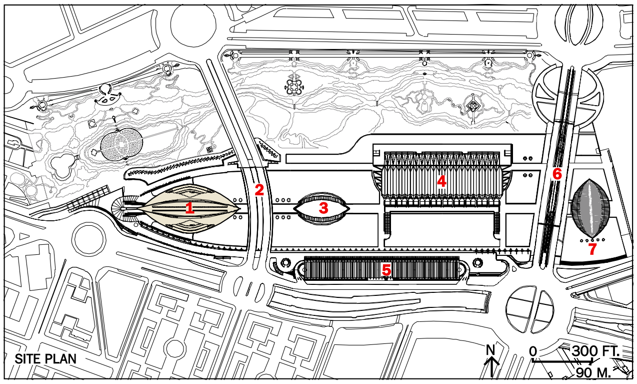
*Rising to a 760-foot-long, purely gestural crest of cantilevered steel, the sculptural Palace of the Arts bears an unmistakable resemblance to Calatrava's opera house in Tenerife [*RECORD*, February 2004, page 78]. For the Valencia version, a pair of steel shells, covered in white* trencadís *(the traditional ceramic-shard mosaic famously adopted by Antonio Gaudí), embraces a mostly concrete structure. With a total audience capacity of 4,000 indoors, the building includes four performance spaces—most prominently, a 1,390-seat opera theater, 1,585-seat upper auditorium, and 380-seat Magistral Hall—a cafeteria, café, and restaurant, plus an open-air, 2,000-seat performance venue, sheltered only by the roof overhead.*

With the realization of this major project, the editors of ARCHITECTURAL RECORD *have invited Luis Fernández-Galiano, editor in chief of* Arquitectura Viva *magazine in Madrid, to provide a critical assessment of the Reina Sofía Palace of the Arts. Inspired by* The Dialogue of the Dogs, *a satiric 17th-century text by Miguel de Cervantes Saavedra, Fernández-Galiano has chosen a highly personal and idiosyncratic tack, borrowing the literary device of talking dogs (complete with the surnames of Cervantes's canines) to deliver the following critique of Calatrava's opera house in Valencia.*

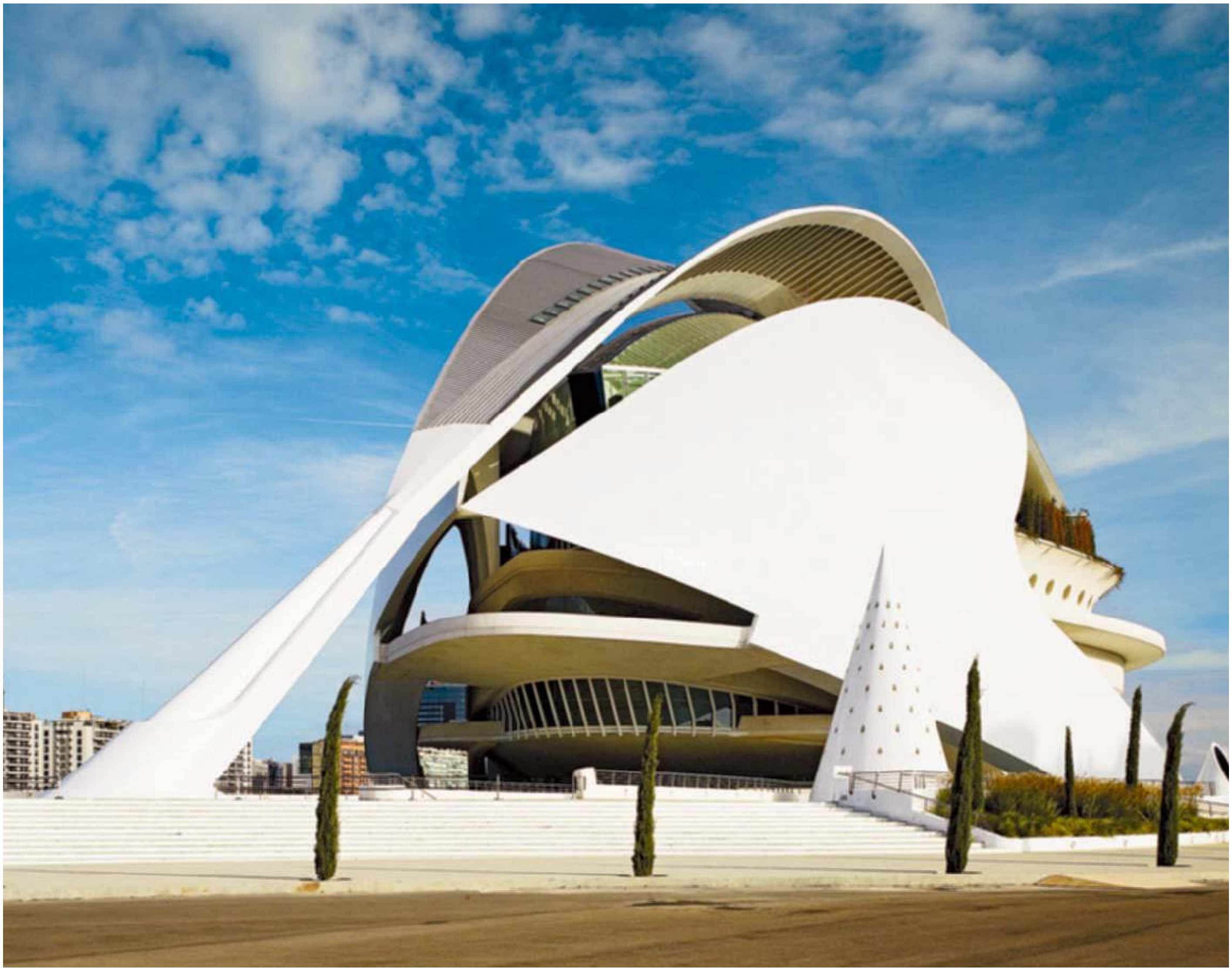
Project: *Reina Sofía Palace of the Arts (Palau de les Arts Reina Sofía), Valencia, Spain*
Architect: *Santiago Calatrava*
Engineer: *Santiago Calatrava*
General contractor: *Acciona-Dragados*
Scenery staging contractor: *Thyssen; Waagner Biro; Chemtrol*



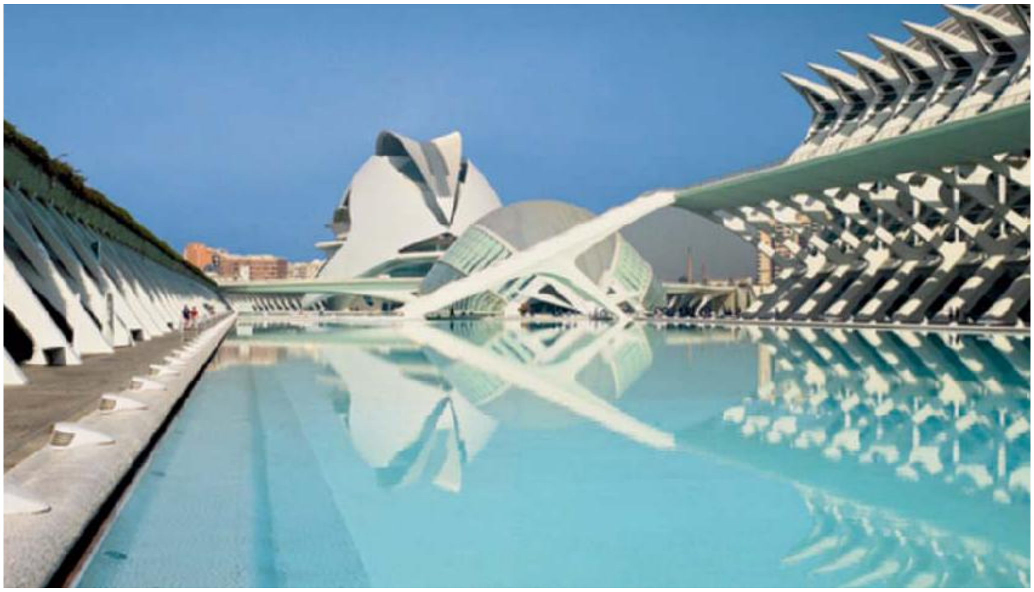
1. *Opera house: Reina Sofía Palace of the Arts*
2. *Monteolivete Bridge*
3. *Planetarium*
4. *Prince Felipe Science Museum*
5. *Promenade and parking structure*
6. *Serreria Bridge (in construction)*
7. *Agora convention hall (in construction)*

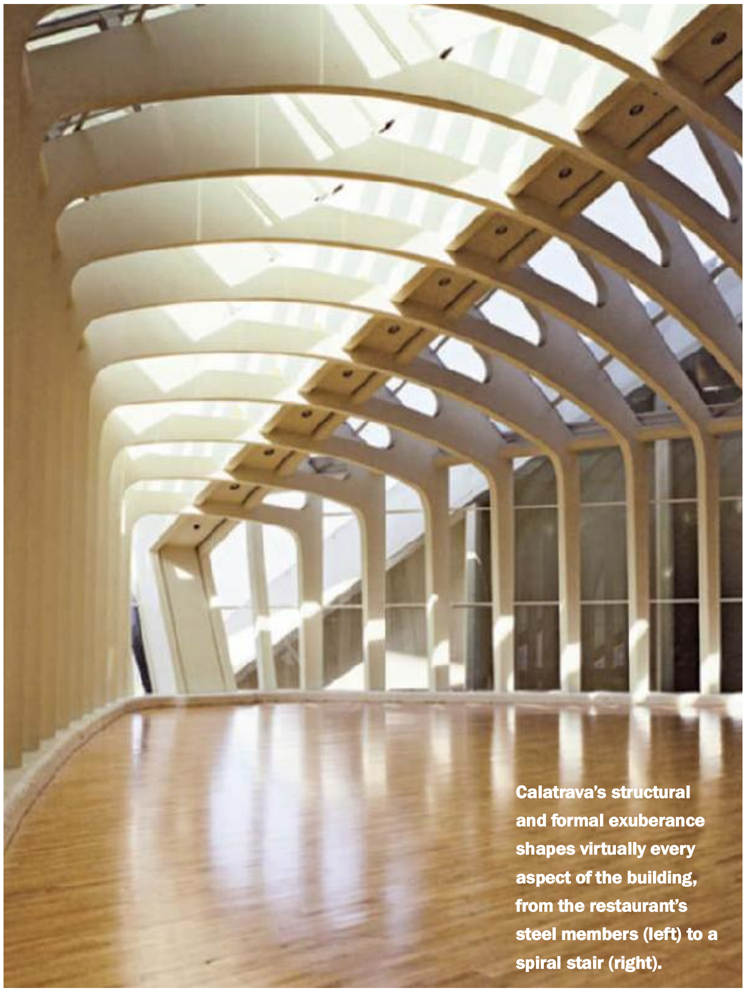


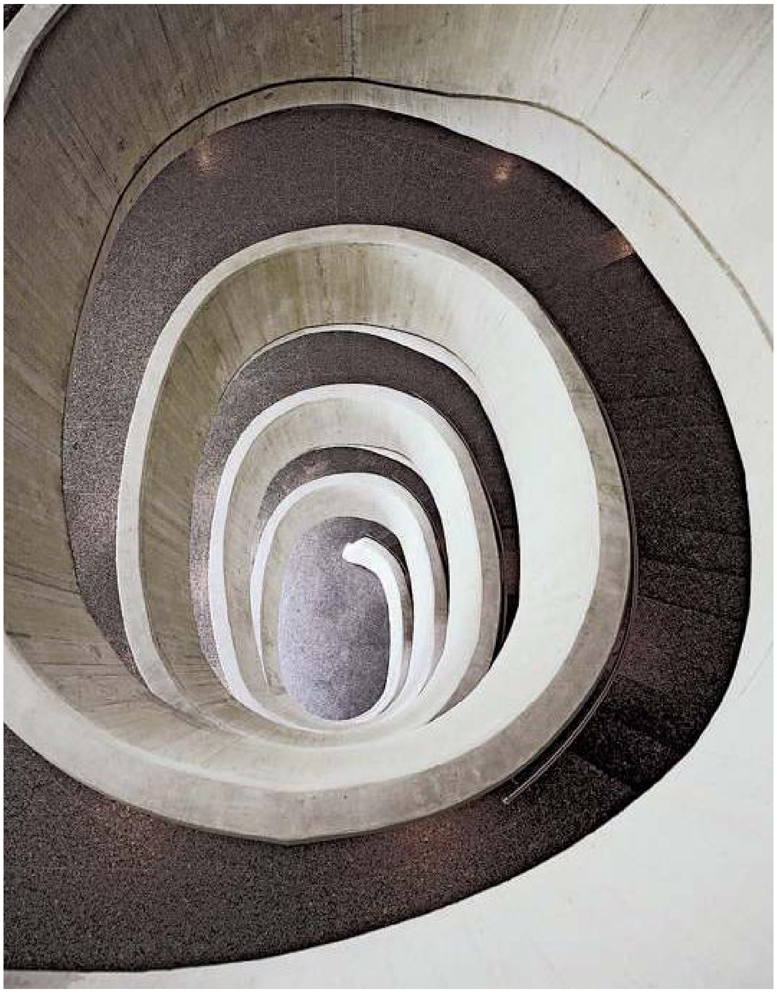
White *trencadís*, a traditional fractured-ceramic mosaic, covers the steel shells over the palace's concrete structure (top). The building has been likened to a spaceship, an eye (below right), and with its steel crest, a warrior's helmet (top and opposite, top). The Hemispheric Planetarium sits just to the east (above right).



Perforated cones beside the opera house (above) house elevators that connect the street and plaza levels. The Hemispheric Planetarium/IMAX theater evokes a human eyeball, socket, and lid—all set over a vast reflecting pool (right). East of the planetarium, right beside the water, is the longitudinal Prince Felipe Science Museum (at far right in photo, right).







Calatrava's structural and formal exuberance shapes virtually every aspect of the building, from the restaurant's steel members (left) to a spiral stair (right).

CRITIQUE

A dialogue between two dogs in Valencia

By Luis Fernández-Galiano

Whenever he is in Valencia, this critic never misses two rites: a visit to the Lonja, a 15th-century Gothic guild hall, the Mediterranean's finest, by the great master builder Pere Compte, with eight Salomonic columns that soar up to 57-foot-high vaults, where they open like palm trees; and at Malvarrosa beach, a *paella*, the delicious rice dish that blends effortlessly with the mild breeze and blue shadows of noon in this most sensual of lands. This time is no exception, but the familiar venues are shattered by the frenzy of the America's Cup.

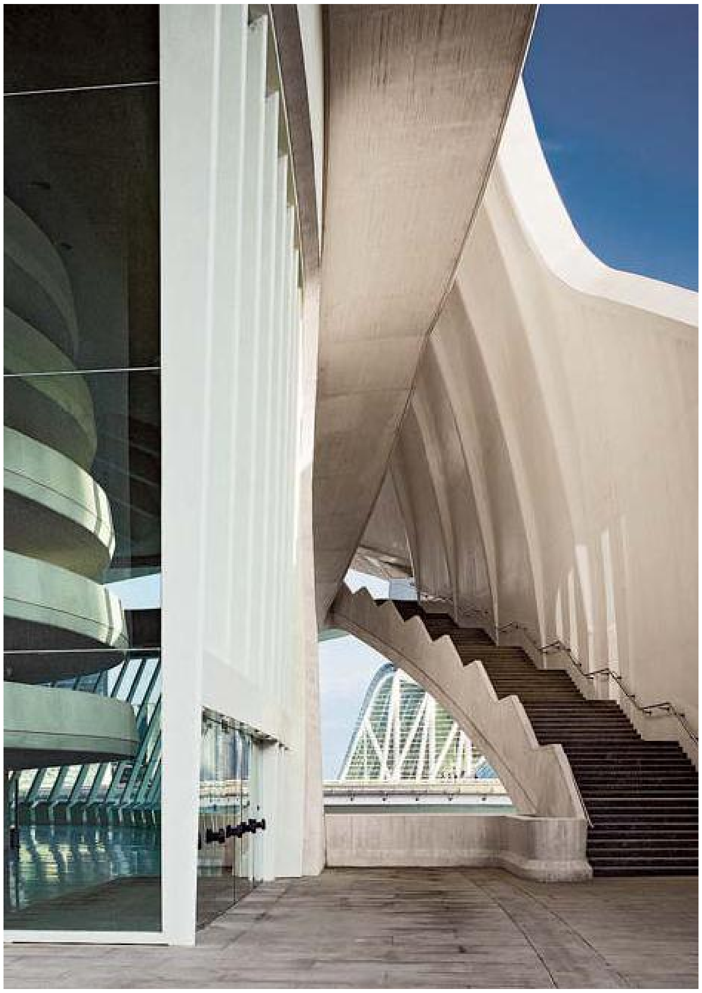
At seaside, sailing boats, poised to challenge the current defender, race in front of the crowds gathering on the new port's piers, while VIP visitors take to the cantilevered decks of architect David Chipperfield's laconic America's Cup Building. And in front of the Lonja, all the attention is on the Art Nouveau central market—where Miuccia Prada threw a huge party shortly before her *Luna Rossa* beat the U.S.A.'s *Oracle*—the favorite structure of Formula 1 C.E.O. Bernie Ecclestone, who has announced his proposal for a race-car circuit in Valencia. That new course would link the yacht race scenarios with Santiago Calatrava's City of Arts and Sciences, a colossal complex by the hometown architect that served as a bombastic backdrop for the Pope's visit here last year. After all, the hold of Calatrava on the public imagination is such that his work could not miss the appointment with the pontiff or the largest sports event ever held in the architect's native town.

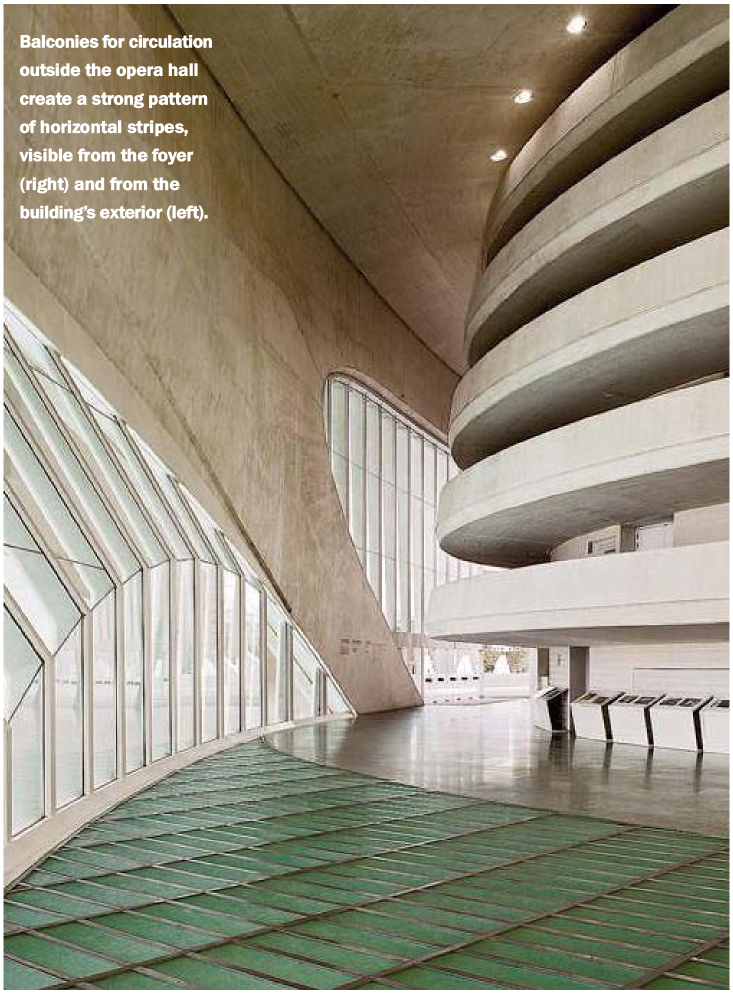
So it is no wonder that this critic finds himself fatally kidnapped by the celebratory mood, sees Calatrava's turning torsos and Chicago spires in the torqued pillars of the Lonja, finds echoes of his work in the crustacean shells and fish bones of the *paella*, and ends up overhearing the softly barked dialogue of two dogs in the dozing haze of the torpor that follows the meal.

SCIPIO: *Berganza, my friend, it is too hot to roam the beach, and under this woven roof, we can find fresh sand to lie on and perhaps some leftovers to fill the belly, which is already roaring.*

BERGANZA: *Brother Scipio, we shall share whatever we find, but most patrons seem still busy with their meals, so we may have to wait a while.*

Luis Fernández-Galiano edits Arquitectura Viva *magazine.*





Balconies for circulation outside the opera hall create a strong pattern of horizontal stripes, visible from the foyer (right) and from the building's exterior (left).

Scipio: *In the meantime, perhaps you can tell me something about your scouting visit to this huge precinct, which they call City of Arts and Sciences, the most amazing array of structures I have ever seen, and that I have not yet ventured to enter because it fills me with wonder and awe. Is it a good place for us to find shelter and food, and maybe company?*

Berganza: *Abandon all hopes of merry company, as the few dogs I saw there were on leashes, and beware you do not end up laced yourself. Free creatures there were not, and stray dogs would starve in that scorched desert. The colossal buildings leave no places for us to hide or take shelter, rubbish is scant and hardly edible, as if visitors to these temples fed on plastic. Only the crowds of schoolchildren leave a decent trail of half-munched sandwiches. No, these seaside sheds are much better for dogs like you and me.*

Scipio: *I hear you call them "temples," and I imagine you mean the structures are so vast and monumental that they are fit for the cult of gods, although which kind of gods I do not know. Not the god of dogs, to be sure!*

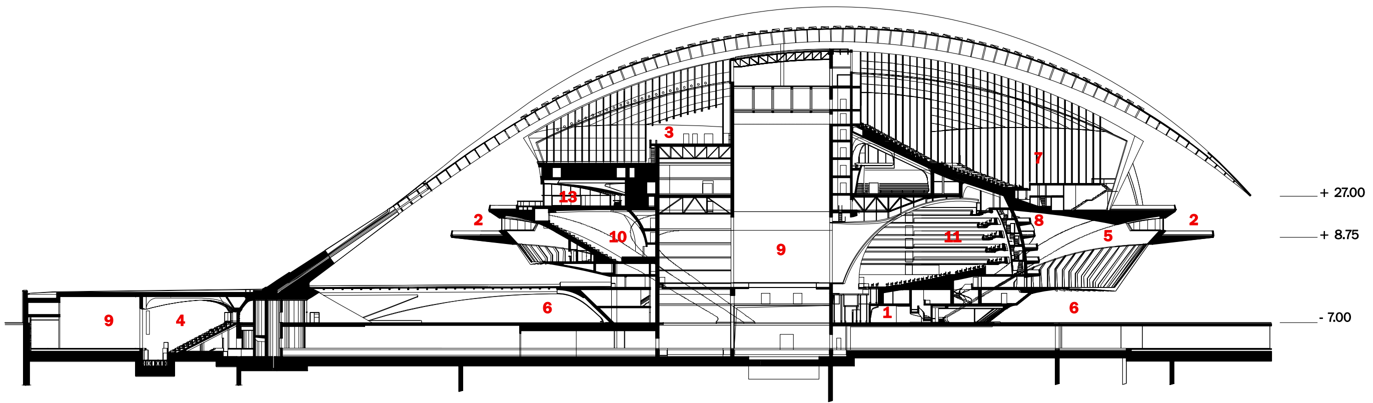
Berganza: *Our god is a patch of shadow and a crust of bread. Theirs are more imposing, Science and Art, though from what I could see, the Museum of Science is mostly concerned with entertainment, and the just-reopened Palace of the Arts is dedicated to spectacle, the most significant being the building itself, moored to the site like a big spaceship lost on a stellar voyage.*

Scipio: *But friend Berganza, by questioning entertainment and spectacle as the purpose of this monumental endeavor, you are behaving like a hard-to-please preacher for whom nothing is sufficiently holy.*

Berganza: *Maybe you are right, Scipio, and we should not complain about the gods of humans, however shallow. After all, we are not footing the bill, and the $454 million for the palace would not have been spent on food and shelter for us dogs, anyway! Our only hope is to become sacred animals in a new religion started by a lover of pets.*

Scipio: *A pet I do not aspire to become, and with regard to religion, is not music a worthy object of cult? If you take away the 760-foot-long steel beak that hovers atop the palace and the two huge shells faced with white* trencadís*—outer parts that resemble the exoskeleton of lower creatures—it seems you are left with a rather conventional opera house, horseshoe-shaped balconies and all. This much I have been told. But I know you once managed to find your way in there, and can offer more details. Beyond the spectacular profile, is there a good hall where music can be performed and revered by all those who find nothing more worthy of devotion? You know, it is said that temples to sound must be judged with one's eyes closed.*

Berganza: *Closed indeed, because these large Italian "horseshoe" theaters have many seats from which you can hardly see the stage, and opera audiences have the dismaying habit of seeking pleasure for the eye. Only if someone can convince them to keep their eyes shut will the building obtain the applause it undoubtedly deserves. I myself did not manage to get in, but lurking around the openings, sniffing for morsels from the catering staff, has given me some hints.*



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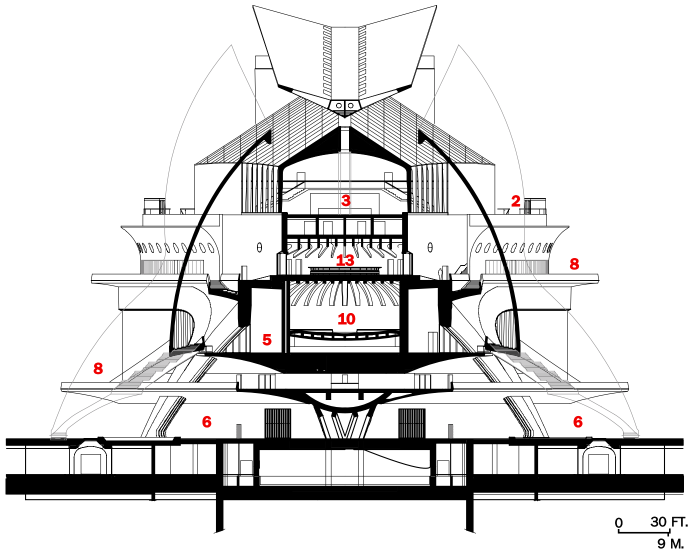
SECTION A-A



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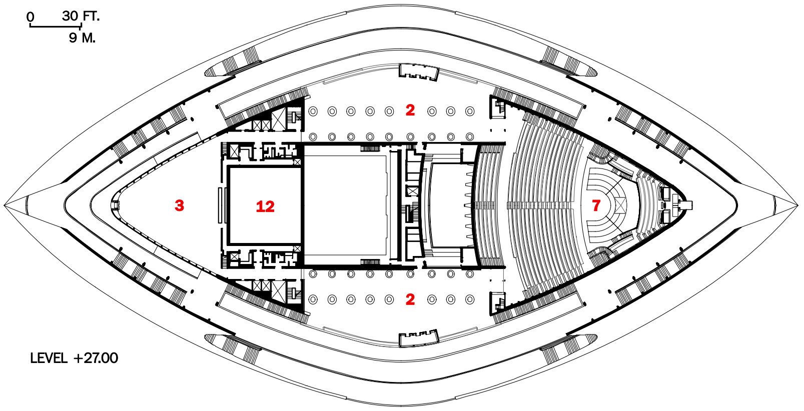
SECTION B-B

1. *VIP entrance*
2. *Terrace*
3. *Restaurant*
4. *Theater*
5. *Foyer*
6. *Exterior public space*
7. *Upper auditorium*
8. *Balcony*
9. *Stage*
10. *Magistral Hall*
11. *Principal theater (opera)*
12. *Void*
13. *Cafeteria*



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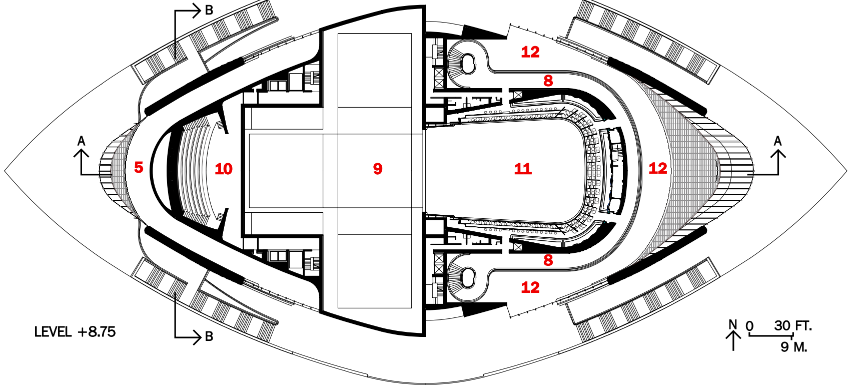

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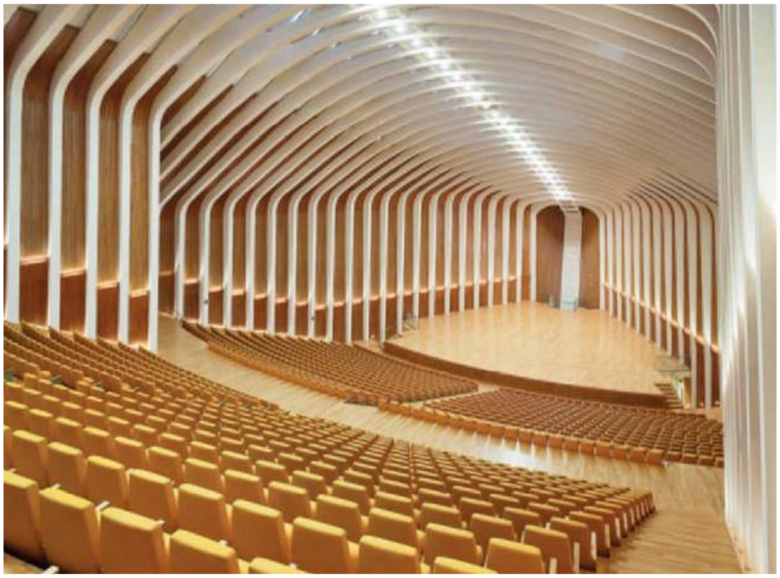

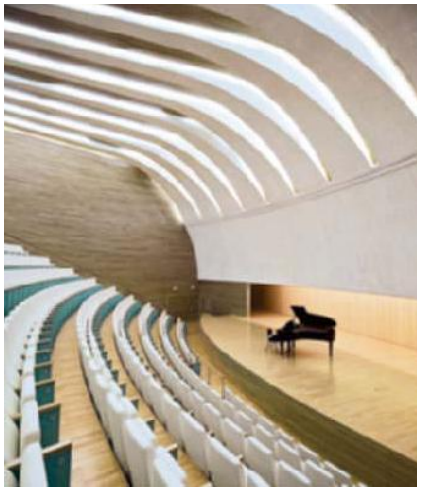

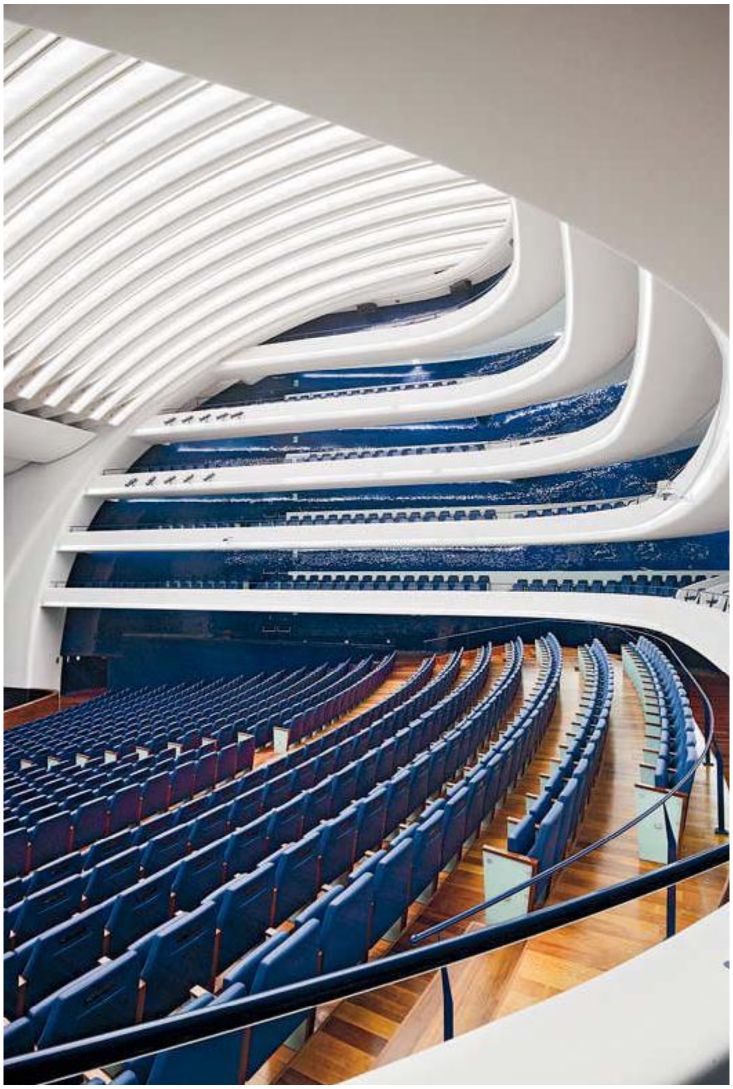

Each of the building's four performance spaces—including the upper auditorium (above), opera house (far right), and Magistral Hall (near right)—has its own character, not just in color and form, but also in the expression of structural members and dynamic patterns of repeated elements.

Scipio: *A few choice tidbits, and you argue like an expert music critic! But I can feel you are in a satiric mood, and must ask you to watch of your tongue. As my namesake in the Cervantes story said, "I will allow you to gossip a little, as long as it is to enlighten rather than draw blood."*

Berganza: *My friend, Scipio, you accuse me of highfalutin arguments, and now you back your claims with literary quotations! But kindly allow me to gossip a little and indulge myself in some idle commentary, as it was my privilege to overhear a dialogue between the music critics for the two main newspapers in Spain when the Palace of the Arts was inaugurated in October 2005.*

Scipio: *I did not know you were in Valencia then! The Queen came for the dedication and a Spanish program that featured fragments of* Carmen *under the baton of Lorin Maazel. But the building, the architects say, was not truly completed yet and, after that ceremony and single performance, the theater closed again until recently.*

Berganza: *Yes, I was already here then, and can see you have a good memory. That inaugural event was, indeed, as a pedant would say, infelicitous, and the critics were dismayed. Straining my ear, I captured bits like "culture of appearances," "empire of the ephemeral," "vanities," "exhibitionism," "fireworks," and "culture of squander" from the* El País *critic; and "the worst is what cannot be mended," "when I entered the hall I turned into stone," "one cannot build a 21st-century theater following the rules of the 18th and 19th," and "never in my life have I faced such a disappointment," from the music critic of* El Mundo. *A rare unanimity, if I may say so.*

Scipio: *Has it been any better this time? Despite the many limited-visibility seats and a mishap that disabled the stage machinery for most of the season, I have heard, the program has been very ambitious, launching Wagner's entire* Ring Cycle *in a new production by Zubin Mehta and La Fura dels Baus (the avant-garde group from Barcelona that, I am told, combines spectacle with ritual, sculpture, music, theater, and audience participation). Even a music-ignorant canine like myself can see they're trying to make a splash.*

Berganza: *And successfully, from what I hear, with Juha Uusitalo as Wotan and Jennifer Wilson as a Brünnhilde with shades of Papagena. No roles for dogs, I'm afraid, even talking ones like ourselves. Maybe Wagner and La Fura blend well with the grandiloquence of Calatrava, who knows?*

Scipio: *A spectacle, at the very least. If the Pope, America's Cup, and Ecclestone's Formula 1 all want Calatrava as a backdrop, this surely means something. Icons may be trivial and expensive, but why do cities compete for them?*

Berganza: *Oh, enough about architecture. I see a benevolent waiter leaving the remains of the meals on top of a newspaper, and my bowels are killing me!* ■

For sources, see page 124.

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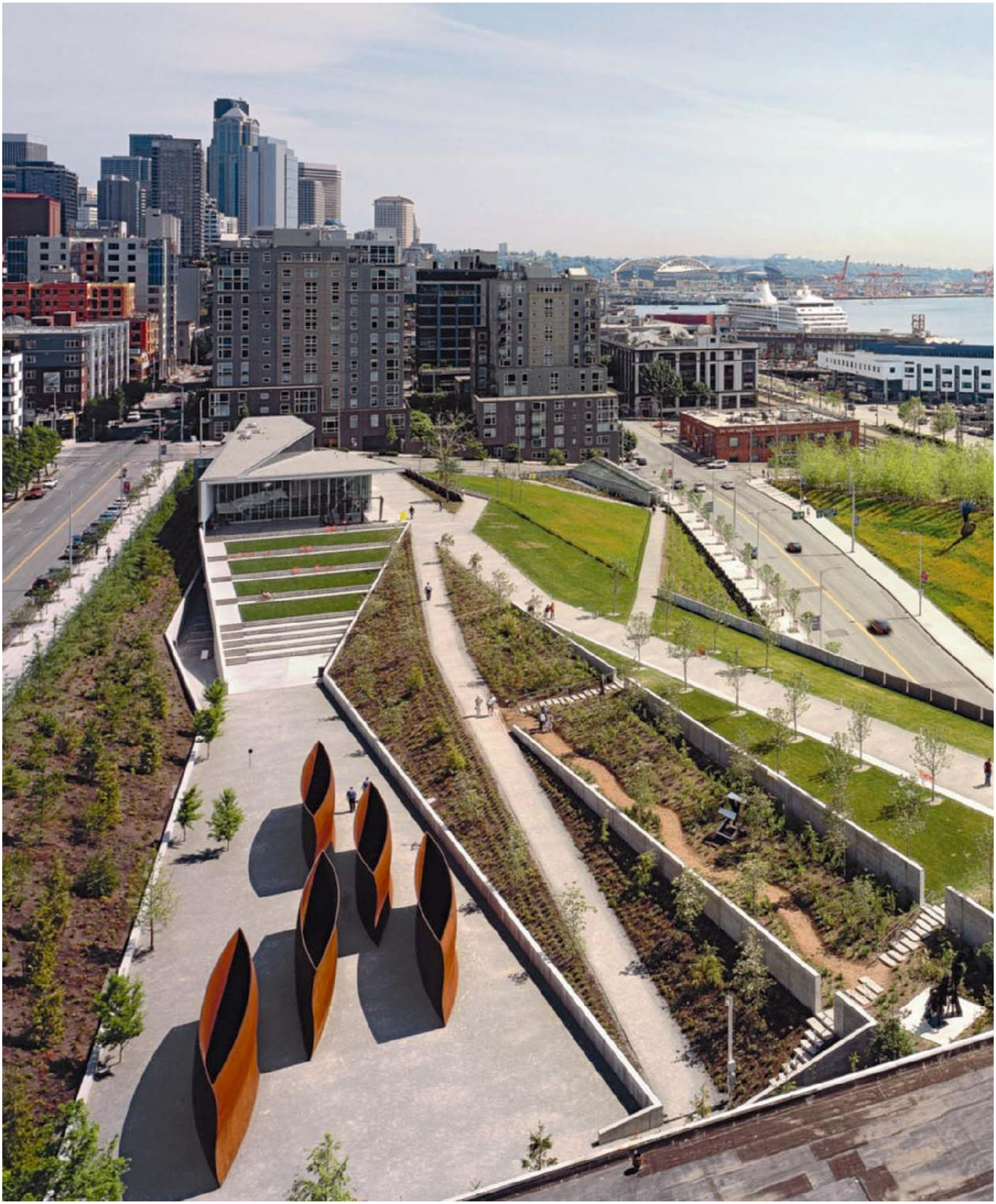
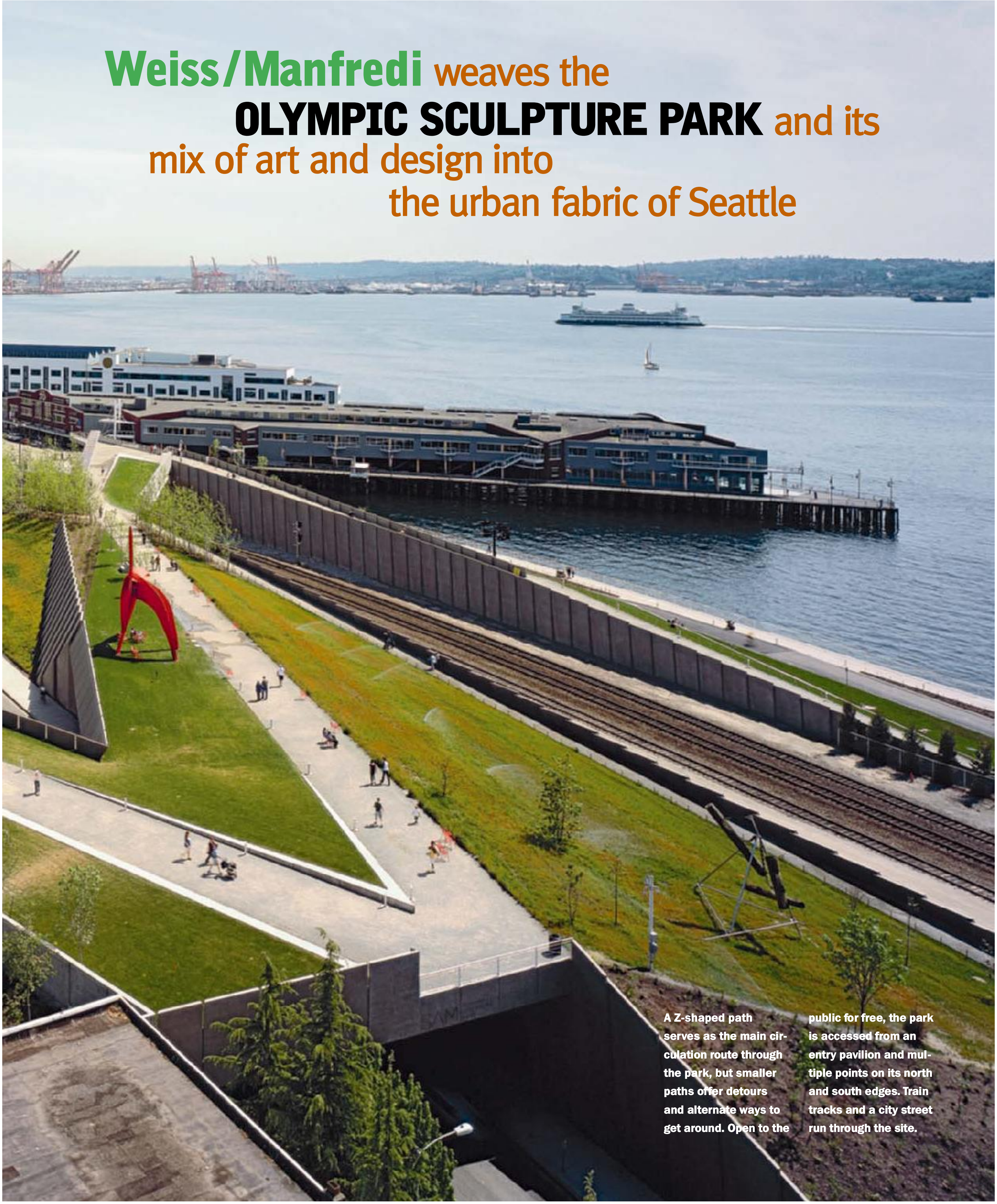
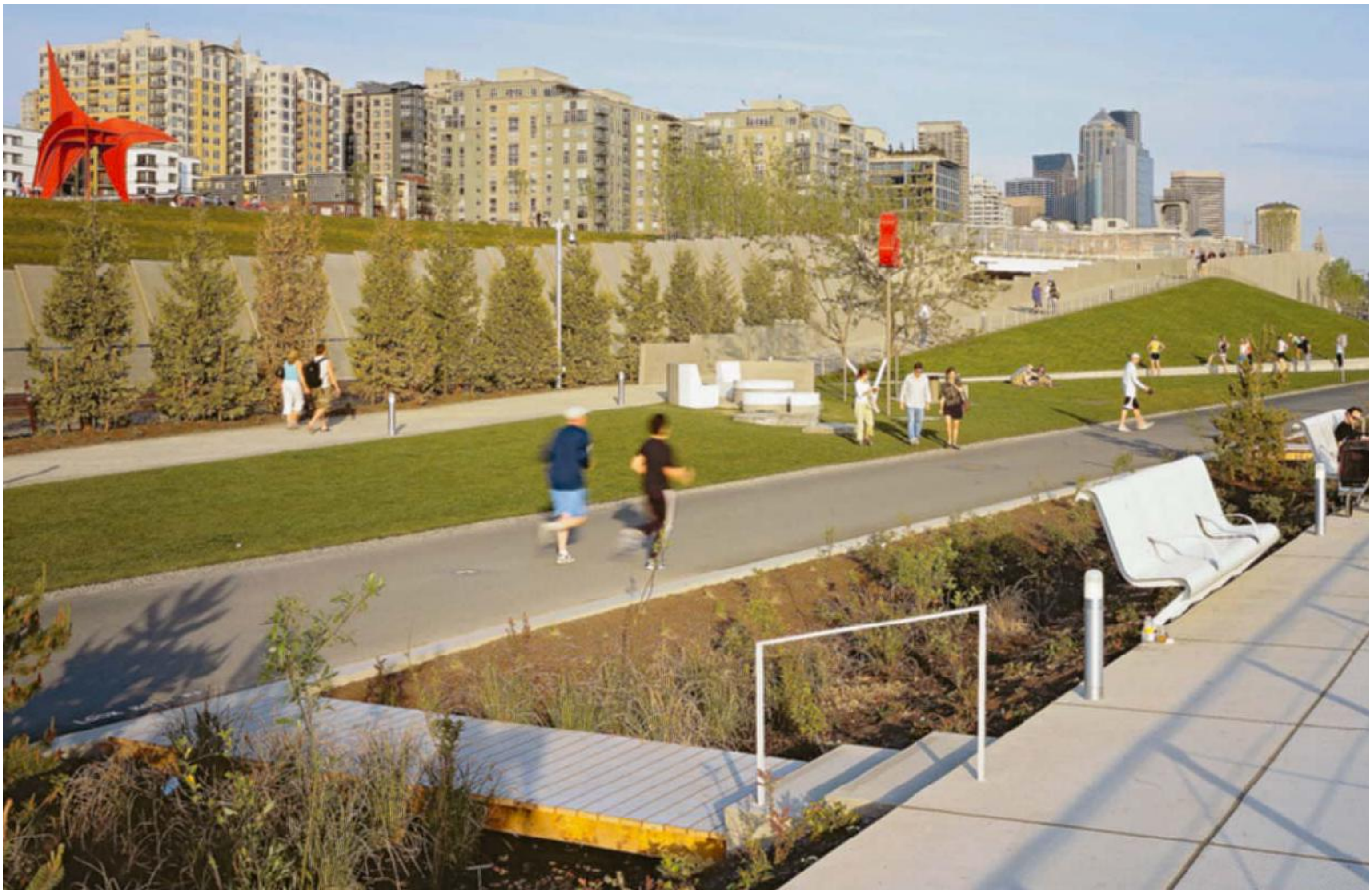
Submit your project to **construction.com/community/gallerylist.aspx.**



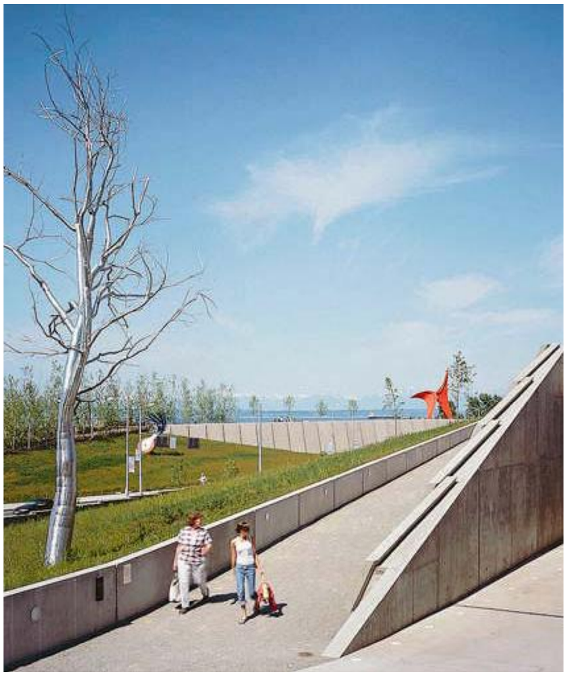
Weiss/Manfredi weaves the OLYMPIC SCULPTURE PARK and its mix of art and design into the urban fabric of Seattle

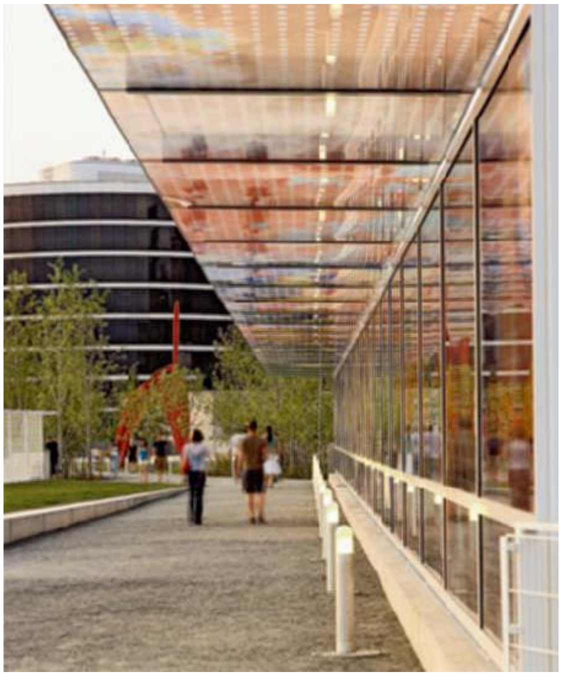


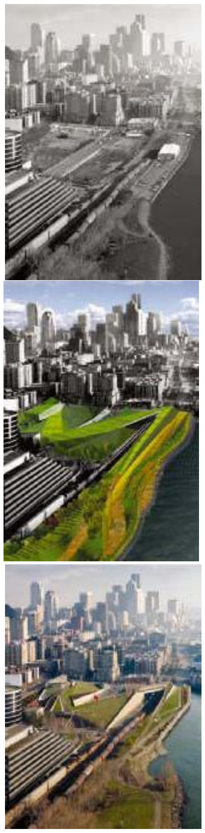
A Z-shaped path serves as the main circulation route through the park, but smaller paths offer detours and alternate ways to get around. Open to the public for free, the park is accessed from an entry pavilion and multiple points on its north and south edges. Train tracks and a city street run through the site.



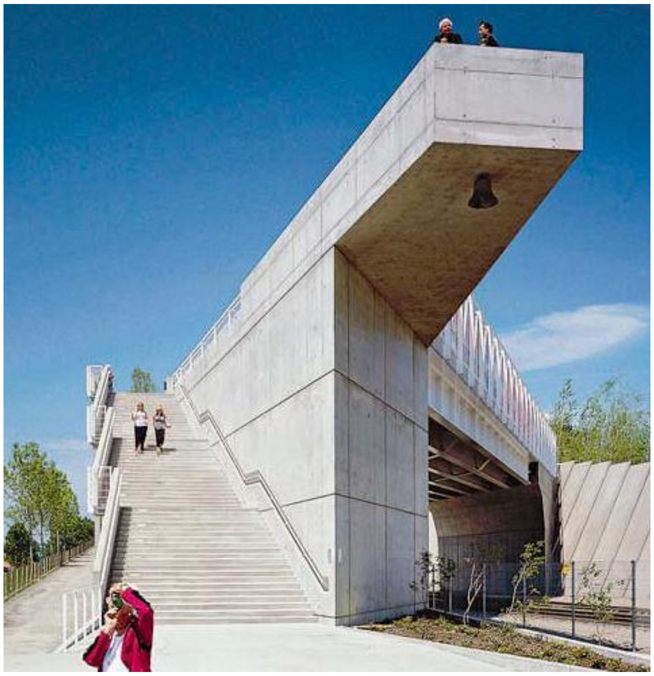
A waterfront promenade (above) stays open all the time, providing a connection to Myrtle Edwards Park to the north. The art will change over time, but current pieces include a steel tree by Roxy Paine and Alexander Calder's *Eagle* (both shown near right) and Teresita Fernández's *Seattle Cloud Cover* (far right), which graces the rail bridge (opposite, bottom).







For most of the 20th century, the 8.5-acre site served as a fuel storage and transfer facility, cutting off the city from its waterfront (top right). Weiss and Manfredi's original scheme (center right) envisioned a continuous landscape that would negotiate the 40-foot drop from the east edge of the site to the water. As built, the park (bottom right) not only provides a venue for art, but includes a new seawall that provides habitat for salmon and a rugged beach on the north that catches large drift logs.



PHOTOGRAPHY: © PAUL WARCHOL, EXCEPT AS NOTED; BENJAMIN BENSCHNEIDER (THIS PAGE, CENTER THREE)

By Clifford A. Pearson

Architects talk a lot about "landscape" these days, using the word in so many different ways it's often hard to know what they mean. Is the reference literal or metaphorical? Does it encompass buildings as well as landforms? Is it just a fancy way of saying "context"? Marion Weiss, AIA, and Michael Manfredi, FAIA, have spent most of their careers wrestling with this slippery concept, from their Women's Memorial at Arlington National Cemetery, in Virginia (which tucks a modern exhibition and conference facility behind a historic hemicycle retaining wall), to the Museum of the Earth, in Ithaca, New York (which cascades down a hillside, creating a kind of artificial gorge). Their design of the $85 million Olympic Sculpture Park in Seattle takes the notion of combining architecture and landscape even further, adding art and infrastructure to a heady mix of components. While some architects have tried to blur the lines between these disciplines, Weiss/Manfredi has knitted them together here, so you can see the seams and the stitches.

The sculpture park occupies a spectacular 8.5-acre site adjacent to the gentrifying Belltown neighborhood and overlooking Puget Sound. But for most of the 20th century, the property served as a fuel storage and transfer facility for Union Oil of California (UNOCAL). In the 1990s, UNOCAL worked with the state to remove 120,000 tons of petroleum-contaminated soil, then prepared to sell the site to developers wanting to put up condos. The Seattle Art Museum, though, had a different idea for the parcel, and with a sizable donation from its chairman, Jon Shirley (who had been president of Microsoft), it bought the land in 1999 for $17 million to create an outdoor venue for showing sculpture. It held an international design competition in which 52 firms participated and selected Weiss/Manfredi on the strength of a scheme (middle left) that uses a Z-shaped path to define a series of zones for displaying art, and to take visitors from the city's edge to the waterfront.

The site, however, posed serious challenges for the designers. Although UNOCAL had already removed the contaminated soil, contractors had to bring in new soil, rebuild a seawall, and create an underwater habitat for young salmon. [For more on the design of the retaining walls and seawall, turn to page 159.] The property also came with active railroad tracks and a major street (Elliott Avenue) slicing through it. Running parallel to the water, the railroad and the street—which had to stay open during and after construction—essentially cut the site into three pieces. Weiss and Manfredi addressed these obstacles with their zigzagging path, a simple but visually powerful device that bridges first Elliott Avenue, then the railroad, and serves as an essential element unifying the entire scheme. They emphasized cuts in the land where the street and railroad run below by building retaining and supporting walls out of angled, sloping panels of precast concrete, a strategy that also enhances a sense of layering.

"There weren't many models of outdoor art venues in an urban setting," says Manfredi, recalling his firm's search for precedents when it started designing the project. Most of the best-known sculpture parks, such as Storm King Art Center in Mountainville, New York, are in bucolic set-

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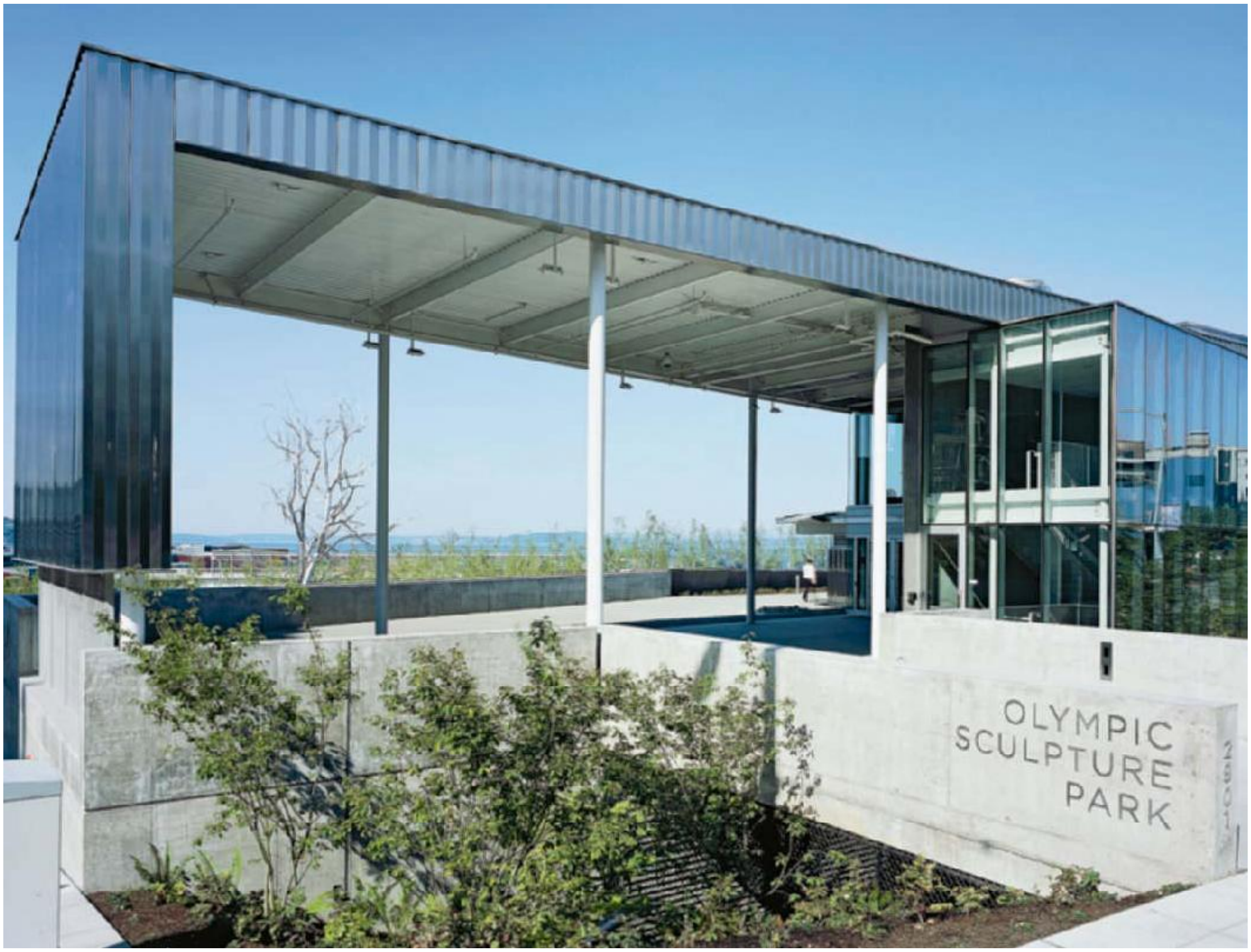
Project: *Olympic Sculpture Park, Seattle, Washington*
Owner: *Seattle Art Museum*
Architect: *Weiss/Manfredi Architecture/Landscape/Urbanism—Marion Weiss, AIA, Michael Manfredi, FAIA, design partners; Christopher Ballentine, project manager; Todd Hoehn, Yehre Suh, project architects; see* RECORD*'s Web site for design team*
Engineers: *Magnusson Klemencic Associates (structural, civil); ABACUS (mechanical/electrical)*
Consultants: *Charles Anderson (landscape); Aspect (environmental)*
General contractor: *Sellen Construction*



The entrance to the pavilion frames views of the water (top). Neither Richard Serra's *Wake* (left) nor Calder's *Eagle* (below) were commissioned for the park, but both have already become closely identified with it.

tings. Even the Hirschhorn's sculpture garden in Washington, D.C., seems removed from the city as sited in a sunken plaza off the national mall.

"The two obvious approaches to the [Seattle] site," explains Weiss, "were to create three gardens connected by bridges or to treat it as one platform built over the tracks and road." But Weiss and Manfredi didn't like either of these options. Instead, they decided "to create a new topography" that would negotiate the 40-foot drop from the eastern boundary of the park (on Western Avenue) to the water's edge on the west, while orienting different parts of the park to particular views of the mountains, the water, and the city. By angling the zigzagging path, the architects created forced perspectives that make distances look longer and the site bigger. They also decided at the very beginning that the trains and cars moving through the landscape would be important elements in the park. "We weren't going to be ashamed of them," states Manfredi.

"I love the way Marion and Michael embraced the urban infrastructure and captured the energy of the city," states Mimi Gardner Gates, the director of the Seattle Art Museum. To that end, the architects not only opened views to the passing cars and trains, but used industrial materials such as precast concrete for retaining walls, poured concrete for a stair and tower at the western end of the railroad bridge, and glass and steel for the bridge itself and an entry pavilion at the top of the site.

"Before we had thought of a sculpture park, we were looking for a way to get art into the community," recalls Gates. The effort developed into a sculpture park when Shirley and fellow museum-board member

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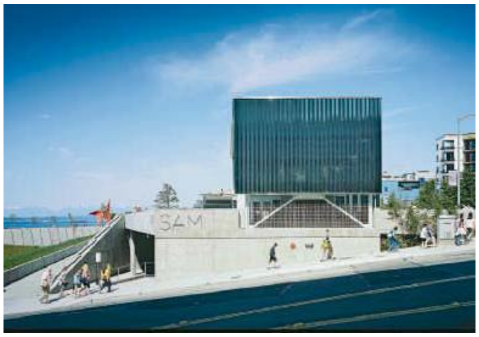
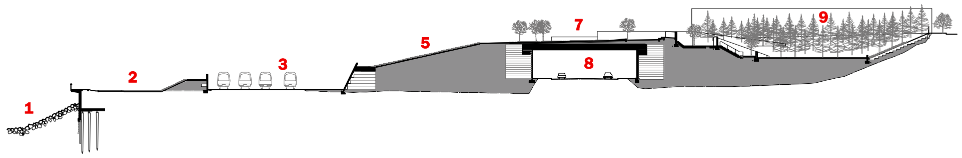
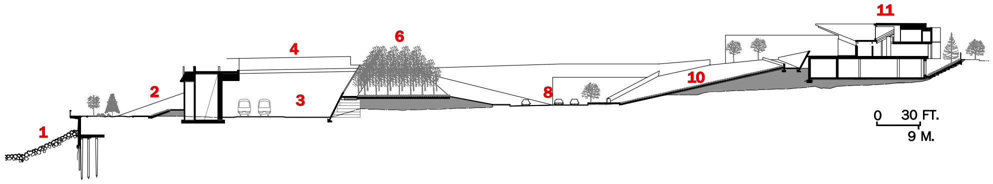


A 50-car parking structure and its entry ramp are tucked under the pavilion (above). The split roof and glazing of the pavilion form a kind of folded landscape (below) that recalls the Z-shaped path running through the park itself. The building and the park also share a similar palette of industrial materials.

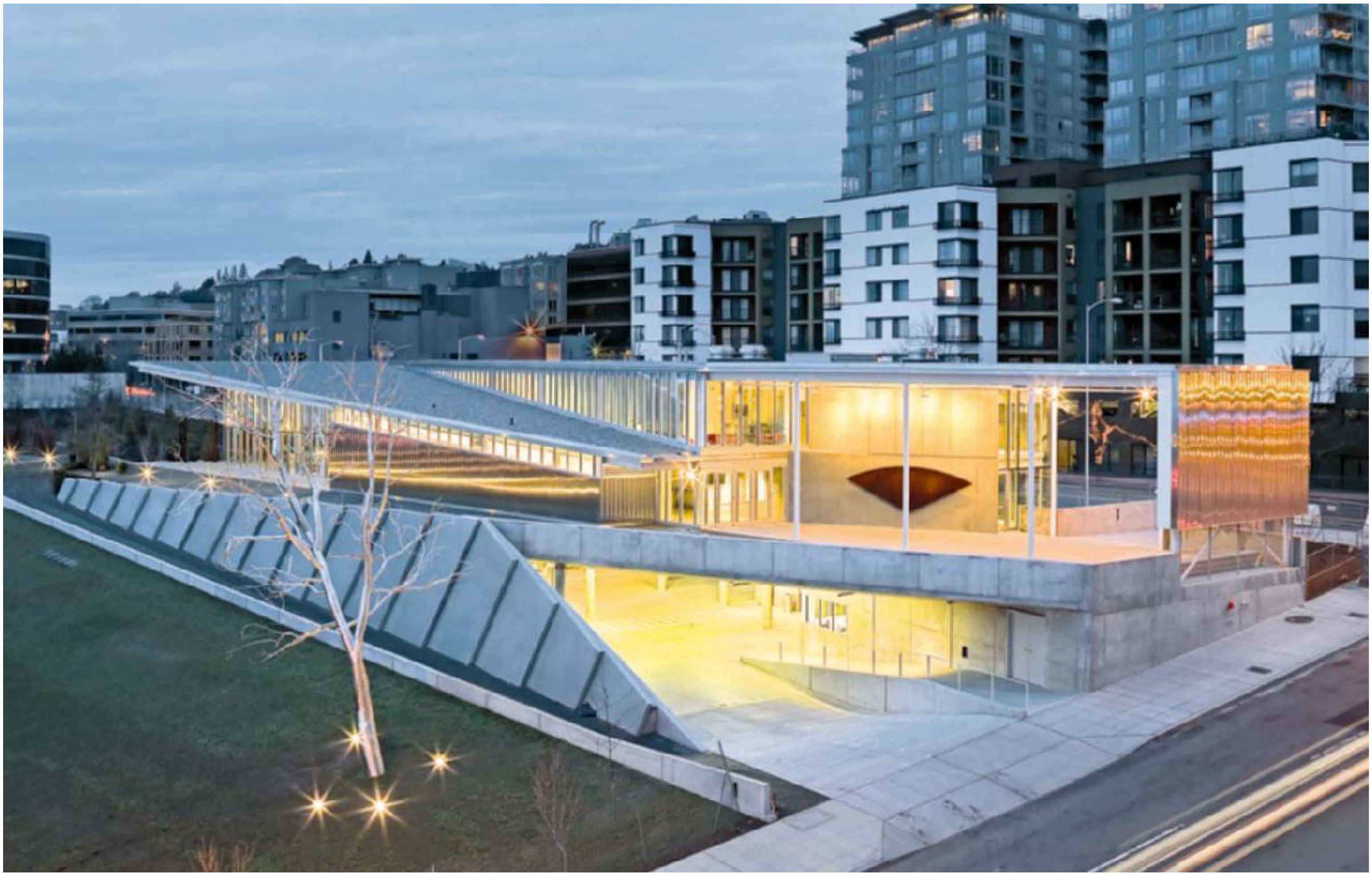


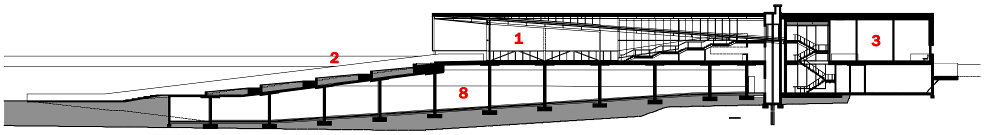
EAST-WEST SECTION 1



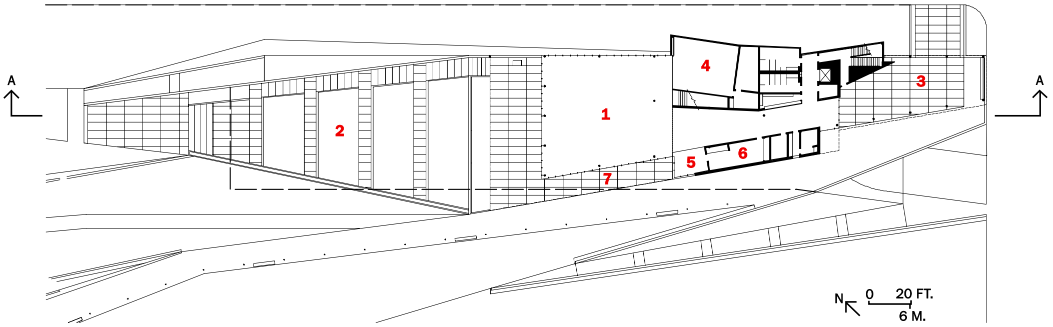
EAST-WEST SECTION 2

1. *Restored shoreline and aquatic habitat*
2. *Shoreline precinct*
3. *Rail line*
4. *Rail bridge*
5. *Meadow*
6. *Grove precinct*
7. *Elliott Avenue bridge*
8. *Elliott Avenue*
9. *Valley precinct*
10. *East meadow*
11. *Pavilion and garage*





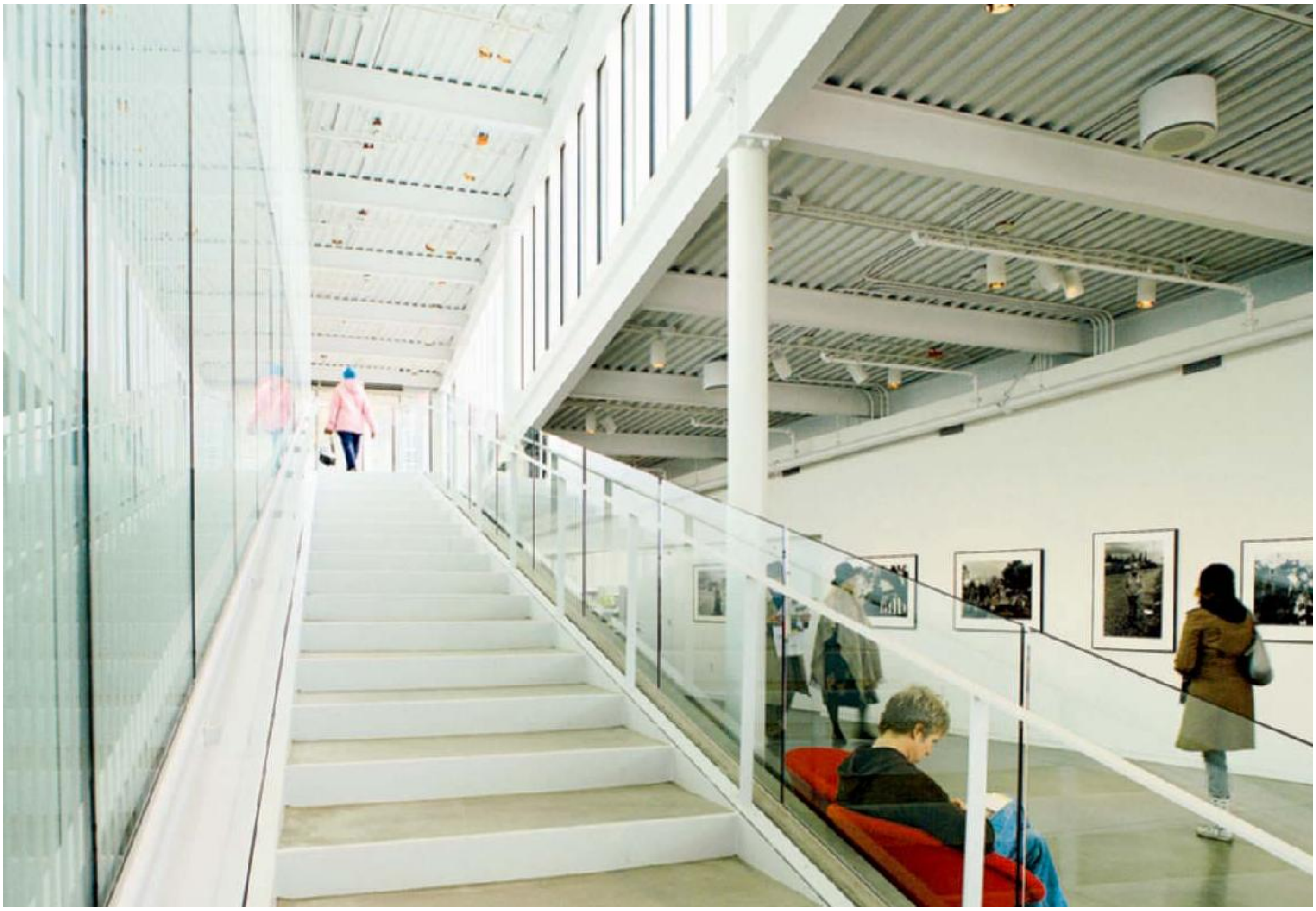
SECTION A-A

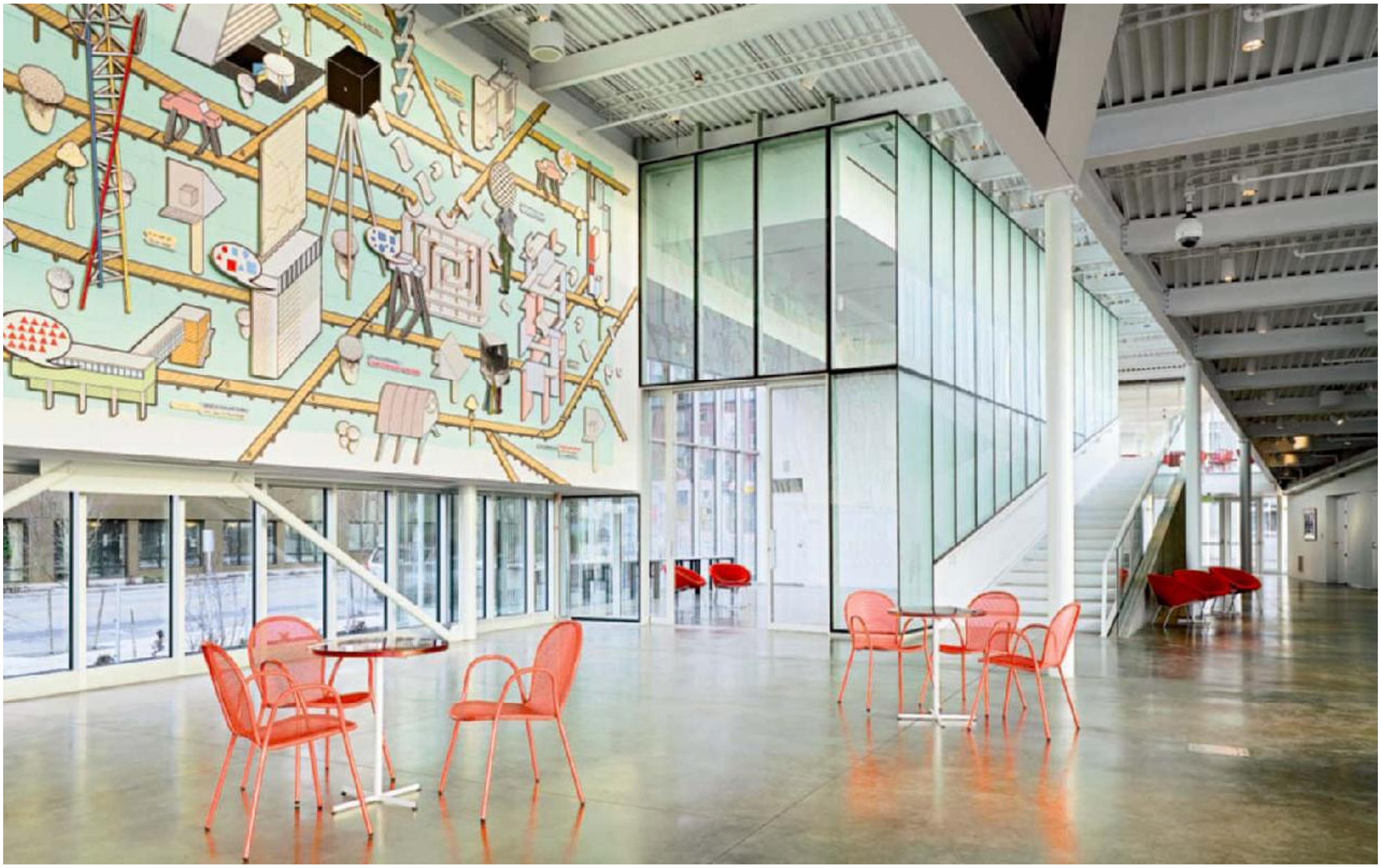


MAIN LEVEL

On the eastern side of the pavilion, a custom glass facade with vertical strips of translucent mirror captures a sense of movement during the day and glows at night (above). The architects wanted the design vocabulary in the park to "migrate" inside the pavilion (below).

1. *Exhibition*
2. *Amphitheater/ terrace*
3. *Entry plaza*
4. *Classroom*
5. *Café*
6. *Servery*
7. *Outdoor café*
8. *Parking*





The main floor of the 34,000-square-foot pavilion provides space for exhibitions and events, seating for the café, a glazed classroom, and a pictorial work by Pedro Reyes entitled *Evolving City Wall Mural* (above).

Virginia Wright offered parts of their collections of outdoor sculpture and the Trust for Public Land in Seattle identified the UNOCAL site as an ideal location. "We saw the park as a catalyst for change," explains Chris Rogers, who had worked for the Trust for Public Land and now is the museum's director of capital projects. "It was a way of moving the city to the water."

Weiss/Manfredi's strategy was to create a continuous landscape whose folds and turns create a series of outdoor rooms for a range of Modern sculptures and native plantings. Some of the artworks were commissioned for the park, including Mark Dion's *Neukom Vivarium* (a 60-foot-long nurse log set inside a greenhouse) and Teresita Fernández's *Seattle Cloud Cover*, whose panels of colorful film set within glass run the length of the bridge crossing the train tracks. Other pieces, such as Richard Serra's *Wake* and Alexander Calder's *Eagle*, have been sited so well they seem to have been created specifically for the park. The plantings tell a mountains-to-sea narrative, as they move from the higher, city side of the park to the waterside, says Rogers. So visitors find western red cedars, hemlock, and Douglas fir near Western Avenue, quaking aspen trees in a grove surrounding Tony Smith's *Wandering Rocks* and *Stinger*, and a tidal garden of kelp, algae, and other intertidal-zone plants at the shore.

Like the park itself, the entry pavilion on Western Avenue works as a folded landscape with angled roofs creating a metal topography and forced perspectives to views of the land and sound. The 34,000-square-foot pavilion houses exhibition space, a café, and a museum shop on the ground floor, and offices upstairs. The architects tucked parking for 50 cars below the pavilion. On the city elevation, corrugated steel and glass containing vertical strips of translucent mirror create a visual rhythm that echoes the movement of cars and pedestrians. On the park side, the building becomes more transparent, with 18-foot-high glass doors opening to a stepped terrace in front of Serra's monumental Cor-Ten ripples.

Although continuous, Weiss/Manfredi's landscape is episodic, offering a series of discrete spatial experiences as visitors move, for instance, from the walled gardens west of the Serra to the wide greensward leading to the bright-red Calder and ultimately to a driftwood-strewn beach. Elements connecting the various spaces—such as the bridges, the concrete stair off the train bridge, and the precast retaining walls—give scale to the landscape while acting as exposed seams. Animating these seams are the trains and cars that zip below and past them. This is an urban park that doesn't take you away from it all as much as put you in touch with things you didn't know could work together: sculpture, trains, quaking aspens, slabs of precast concrete, and a Z-shaped gravel path. ■

PHOTOGRAPHY: © LARA SWIMMER (OPPOSITE TWO)

For sources, see page 124.

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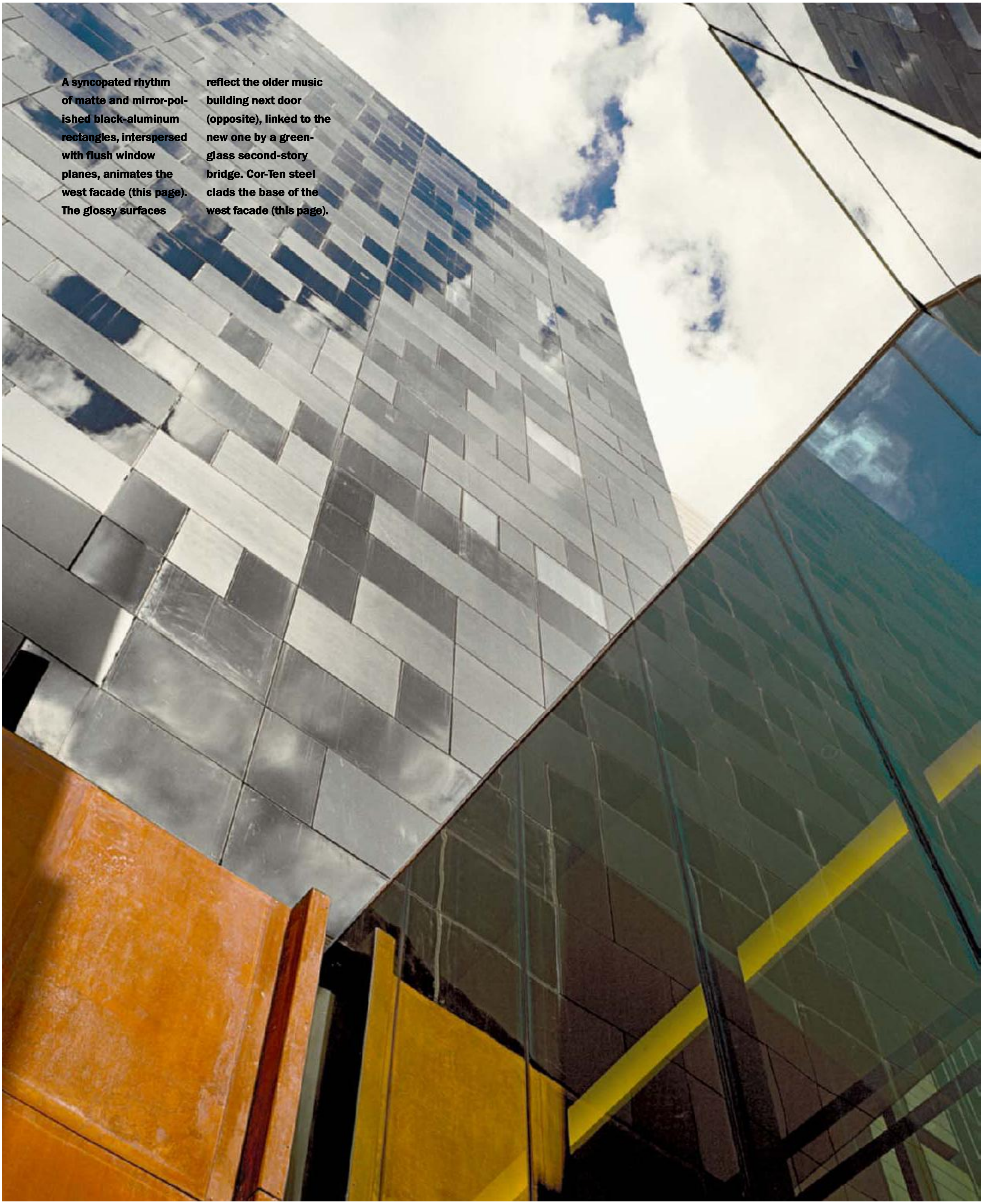
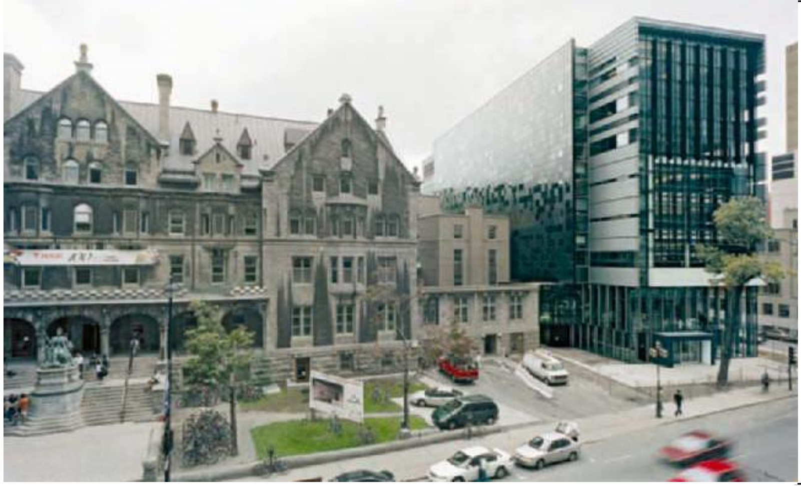
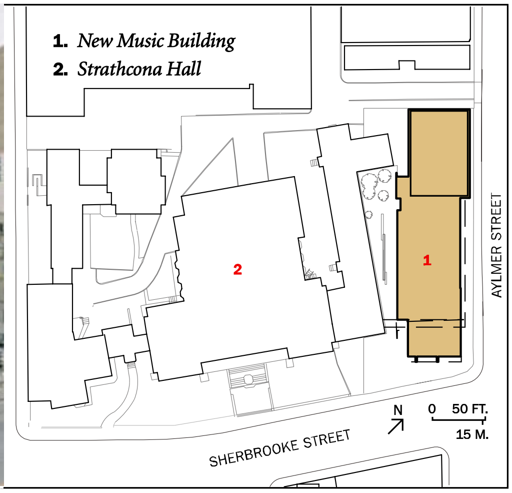
Submit your project at ***construction.com/community/gallerylist.aspx***.



A syncopated rhythm of matte and mirror-polished black-aluminum rectangles, interspersed with flush window planes, animates the west facade (this page). The glossy surfaces reflect the older music building next door (opposite), linked to the new one by a green-glass second-story bridge. Cor-Ten steel clads the base of the west facade (this page).

Tapping into the rhythms of the city, Saucier + Perrotte compose the NEW MUSIC BUILDING for McGill University, in Montreal





PHOTOGRAPHY: © MARC CRAMER

By Sarah Amelar

Unexpected edge conditions and juxtapositions characterize not only the location of McGill University's New Music Building (NMB—until it gets a donor name), but also the complexities of the department itself. The site, a sliver of land at the southeastern corner of the 80-acre campus, lies at an intersection along Sherbrooke Street, a busy commercial strip in downtown Montreal, where the visual clamor of fast-food joints, upscale restaurants, and high-rise chain hotels competes with the rush of automotive traffic and the underground rumble of nearby subway lines. Hardly the obvious spot for a recital hall and acutely sensitive recording studios. But the parcel also happens to border the university's main music building, the ornate limestone Strathcona Hall (with its earliest section, circa 1899, designed by Bruce Price in "British Château" style). And it was essential that the new structure connect with the old programmatically and spatially.

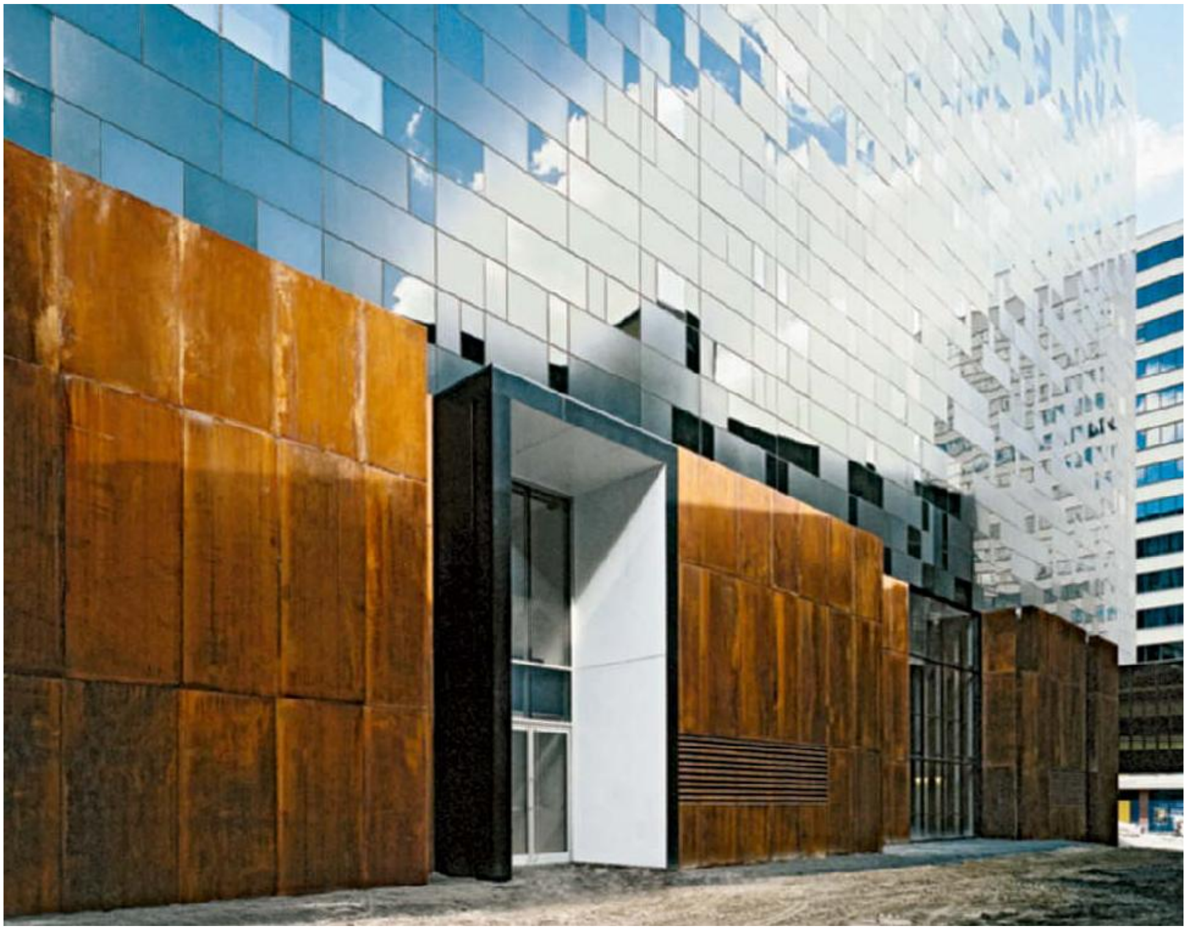
Adding to an already complicated mix of site adjacencies, the new, $30 million building, by architects Saucier + Perrotte with Menkès Shooner Dagenais Architectes, had to engage a department drawn from a remarkable range of disciplines. While McGill's music school, with both undergraduate and graduate programs, takes pride in its traditional conservatory and such humanities-based studies as musicology, its staff and faculty run the gamut from respirologists to physicists, neuroscientists, psychologists, and computer, sound, and electrical engineers—often approaching music from places deep in the realms of science and technology.

So where to begin? Working from the outside in and inside out, Saucier + Perrotte principal Gilles Saucier took cues simultaneously from the campus configuration, the urban context, the local topography, and an evolving set of interior spatial needs.

Saucier recognized that while Sherbrooke Street speaks of a bustling downtown, the quieter, perpendicular Aylmer Street, defining the parcel's eastern edge, reveals key aspects of the landscape. Like a topographic section cut, Aylmer ascends a hill from the St. Lawrence River and Montreal's Old City, to the south, continuing along a plateau as it extends through the McGill campus, gradually rising to the small but iconic mountain called Mont Real. The site occupies the relatively flat transition zone between urban density in its immediate foreground, and a high, verdant slope in the near background. Equally significant to Saucier, Aylmer jogs (or shifts) to the east once it crosses Sherbrooke to the university, "as if," the architect suggests, "the McGill campus had acted like a geological plate shifting the city grid."

Taking inspiration from these real and metaphoric geological con-

Project: *New Music Building at the Schulich School of Music, McGill University, Montreal*
Architect: *Saucier + Perrotte—Gilles Saucier, design principal*
Executive architect: *Menkès Shooner Dagenais Architectes—Anik Shooner, project architect*
Engineers: *Saia Deslauriers Kadanoff, Leconte Brisebois Blais (structural); Pellemon/BPR (m/e)*
Acoustics: *Artec*



The Cor-Ten-steel cladding at the base of the west facade not only adds to a lively play of textures and materials, but also makes reference to the earthiness of the courtyard beside it (left). The main entry elevation, along Sherbrooke (opposite), is mostly transparent, engaging the lobby and library with the street. Rather than imitate the older music building stylistically, Saucier sought a balance in compatible contrasts.

ditions, the architect imagined the building as exposed strata that had "eroded" from the once-larger mountain to create the plateau. As built, the 126,750-square-foot rectangular structure, rising eight stories above grade, has a strong horizontality along Aylmer Street, abstractly expressing the fictitious layers of "geological history." Here, Saucier introduces a deep concrete band, 20 feet up from the ground, intended to evoke a former ground plane, extending south from the mountain. Black and gray zinc cladding, with long, dynamically staggered strip windows, compose the elevation above the concrete band, with glass, brick, limestone, and concrete below it.

Because none of the tropes here are explicit or literal, some critics have interpreted this elevation as more musical than geological, with the reflections in the slivers of window playing lyrically against the precision—like a regular tempo bar—of the rectilinear, metal-clad bands.

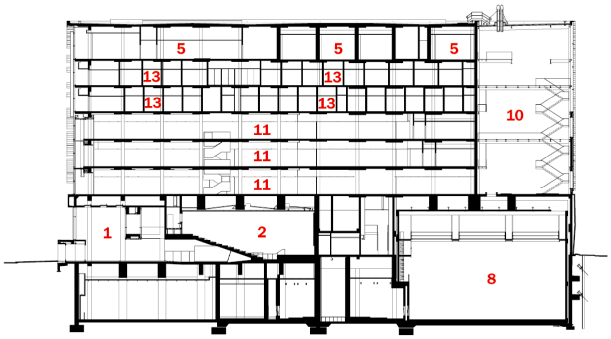
The west facade has a very different beat, with a syncopated rhythm of matte and mirror-polished black-aluminum squares and rectangles, interspersed with flush windowpanes. The staccato of glinting surfaces animates this long elevation with flickering reflections of Strathcona Hall. Rather than jam together the contrasting new and old buildings, Saucier left breathing space between them for a long, narrow courtyard. At the base of this elevation, earthy Cor-Ten-steel cladding plays against the aluminum above it. Adding to the material palette, a second-floor bridge, enclosed in green glass, links the two buildings.

The NMB's entry facade, along Sherbrooke, to the south, is skinned mostly in transparent glass, opening it visually to the street, while revealing a double-height lobby that rises to a three-story, digitally wired music library (triple glazed), beneath two floors of offices, and finally, a top level of research labs, along with meeting and administrative rooms.

Projected toward Sherbrooke, beyond the discreetly setback Strathcona Hall, the NMB embraces and subtly expands the older building's already popular forecourt, centered on generous tiers of front steps. Built to its lot lines, the new structure holds the site like a cornerstone marking the entire campus's southeastern boundary, while benefiting from a slight bow in Sherbrooke to gain physical prominence in the city.

But beyond establishing the building's urban presence, many of the exterior moves come from interior functions. The school's energetic and visionary dean, Don McLean, who worked closely with the architects and acousticians to fine-tune and realize the design, put forward an ambitious program, in which a key element was the Centre for Interdisciplinary Research in Music Media and Technology (CIRMMT, pronounced "Kermit"). This center required state-of-the-art performing and recording spaces, as well as laboratories for investigating, for example, the perception and cognition of music and motion; digital sound modeling (synthesis and analysis) and acoustics; and virtual, 3D, multimodal immersive systems.

The centerpiece of CIRMMT is a five-story multimedia room (MMR)—a column-free, 60-by-80-by-60-foot-tall black box that can accommodate a symphony orchestra or choir, providing a cutting-edge sound stage for film scoring. The facility also includes a rehearsal hall for opera and voice. As recording studios with high-tech digital controls, both chambers demanded isolation from vibrations and sounds emanating from outside and inside the building (including its mechanical systems).



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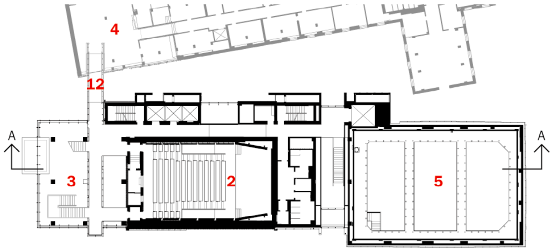
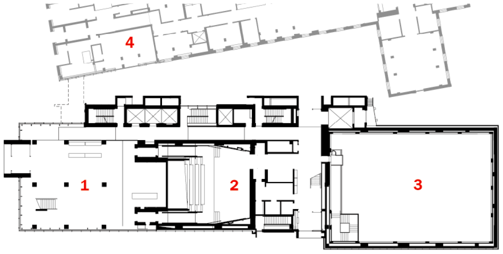
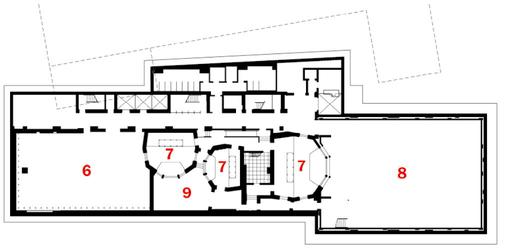


MEZZANINE LEVEL

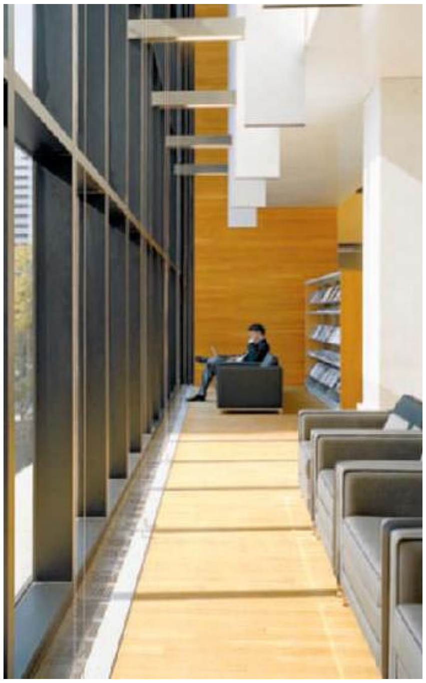


STREET LEVEL

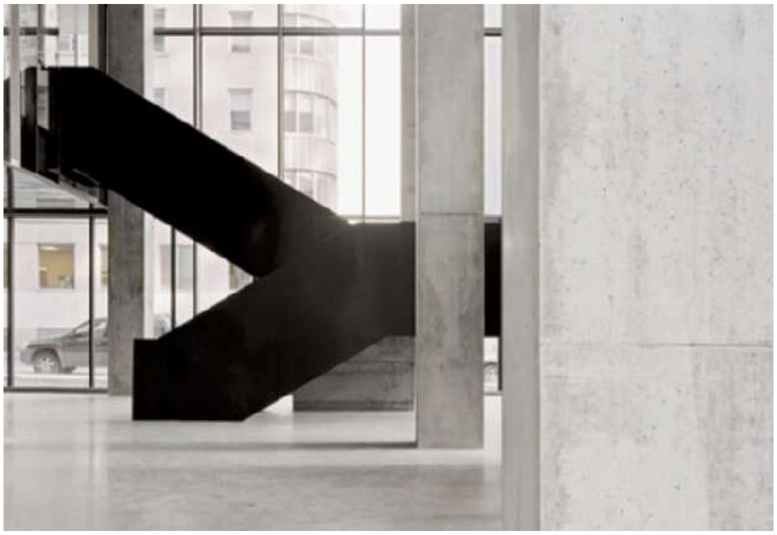


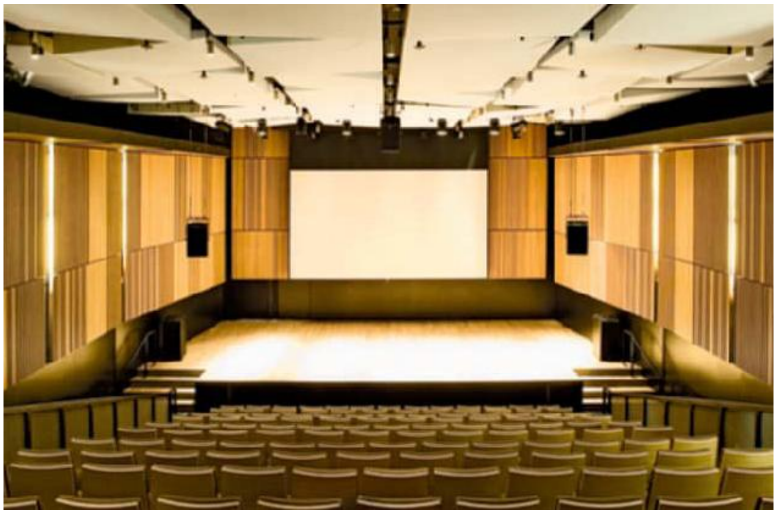
LOWEST LEVEL (BELOW GRADE)

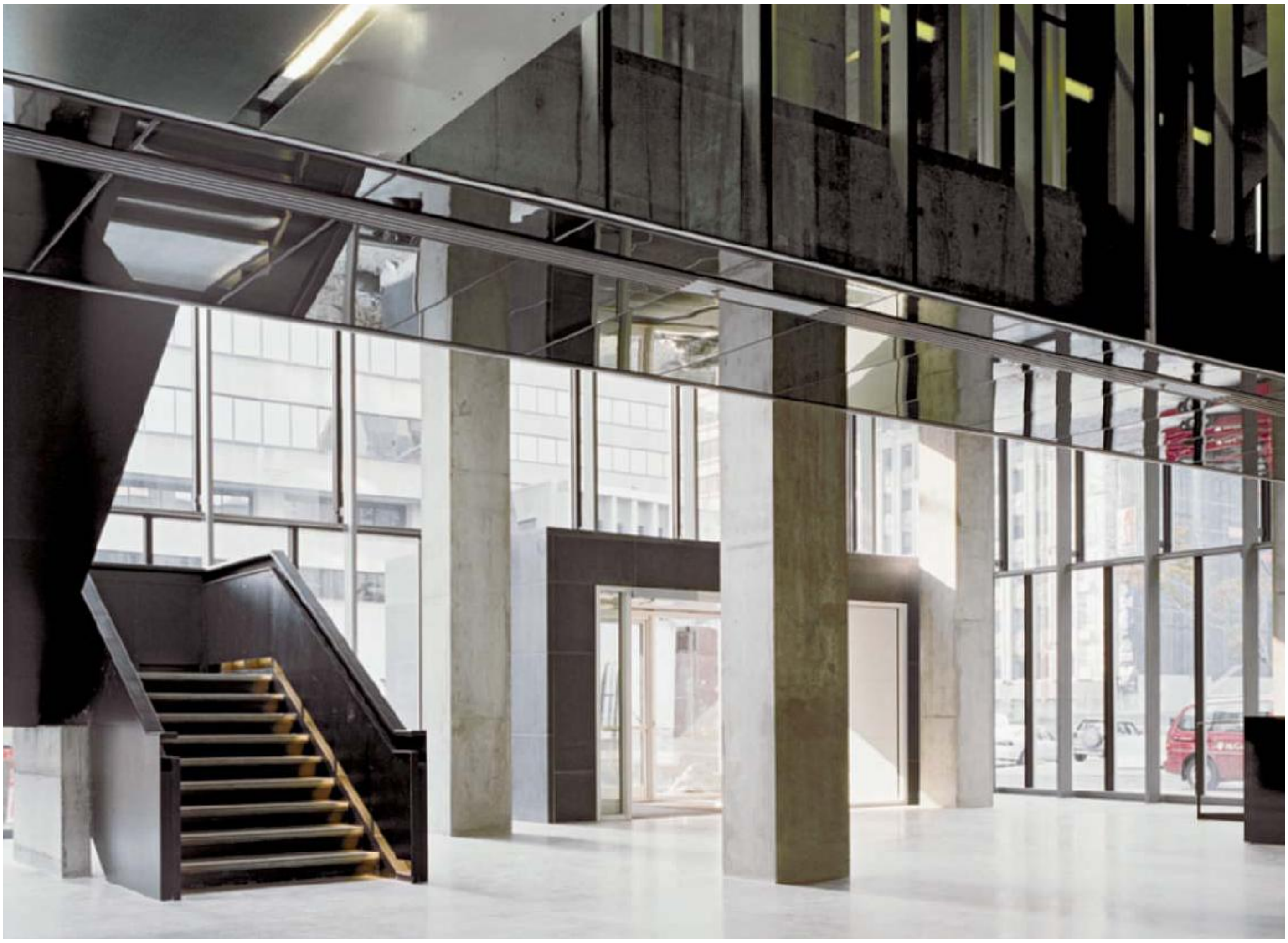
1. *Lobby*
2. *Recital hall*
3. *Void*
4. *Strathcona Hall*
5. *Lab, meeting, or administrative space*
6. *Opera rehearsal hall*
7. *Control booths*
8. *Multimedia room*
9. *Recording studio*
10. *Mechanical*
11. *Music Library*
12. *Bridge (to Strathcona Hall)*
13. *Office*



The library's layers create a facade behind a facade (left). A stair of folded, black steel (opposite and below) snakes through the lobby and then reemerges in the library above it. The 200-seat recital hall has ribbed, oak acoustic panels (bottom).







To accomplish this acoustic feat in the thick of the city, the architects, working closely with acoustician Larry King, then of ARTEC, built the MMR as a concrete box within another (separated by neoprene pads for sound and vibration isolation) and buried the lowest two stories below grade, where both chambers, as well as small recording studios, are entered. The top of the nested volumes, rising two floors above the ground level at the north end of the site, along Aylmer, sets the datum line for that concrete "geological layer," wrapping all the way around the front of the building.

Rather than mount the mechanical systems on the roof in the conventional manner and run long ducts, increasing the potential for interior sound pollution, the architects perched a six-story-high box of mechanical stacks and catwalks above the MMR, carefully isolating the upper volume on concealed legs that descend to the ground. As a result, the mechanical feeds into each floor are short, direct—and quiet. Saucier also sequestered other potentially "noisy" elements, including fire stairs and elevators, behind the west elevation, separately articulating this functional vertical layer.

Expressions of the building's interior on its skin also extend to the 200-seat recital hall, entered off the lobby and its mezzanine. On the Aylmer facade, the edge of a folded plane of concrete reveals the rake of the auditorium floor, while bricks, laid vertically end-to-end above it, evoke the ribbed, oak acoustic panels inside the hall.

What is ultimately most remarkable about the building is how it renders a multitude of complicated factors perceptually simple. While the exterior, especially to the east, offers a high-energy dynamism and eclectic material palette, the overall geometric purity keeps the composition from ever feeling excessive. With reductivism in the details, disposition, and sheer number of different spaces, the interior conveys clarity and serenity. Because the design evolved through a protracted series of iterations, the architects had time to work out key spatial proportions (optimizing acoustics) and solve complex problems with pure, uncluttered, and at times seemingly straightforward results. "What you don't see are the spaces *between* rooms," says Saucier. "Much deeper than in ordinary buildings, they hold miles of cable. We even provided portals so that, say, CBC radio-broadcast trucks can hook up directly to our performance or recording spaces."

The lobby fully engages Sherbrooke Street, a major thoroughfare, just outside its door. This interior has simply a floor of polished concrete, raw-concrete columns, and a rough granite door surround.

Free of distractions, the lobby, with floors of polished concrete, has a quiet elegance, animated by a sculptural stair of black steel that snakes up through it (a recurrent motif in Saucier + Perrotte's work), by the green-glass bridge that crosses the mezzanine, heading toward Strathcona Hall, and by the movement of people through the space or along the highly visible streetscape beyond it. "This was like doing an art school," says Saucier. "You want to inspire people, but if you put in too much design, you rob the students of their chance to express themselves." ■

For sources, see page 124.

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Submit your project to **construction.com/community/gallerylist.aspx**.

SOURCES/RESOURCES PROJECTS

NELSON-ATKINS MUSEUM OF ART

Kansas City

(page 92)

Sources

Glass curtain wall: *Bendheim Wall Systems*

Concrete: *JE Dunn Construction*

Roofing: *Tamko Roofing Products*

Glazing: *Cricursa; Saint Gobain; OkaLux*

Doors: *Blumcraft of Pittsburgh, Crane Revolving Door Company, Dawson Doors (entrances); DH Pace (custom sliding and pivoting gallery doors); Horton Automatics (sliding);*

Hardware: *Schlage (locksets); Von Duprin (exit devices); Direct Process Metal Fab (custom pulls)*

Acoustical ceilings: *Fellert Ecoustic USA*

Cabinetwork: *Dunnke Millwork Company*

Custom wood ceilings: *Architectural Components Group*

Polished plaster: *Armourcoat*

Floor tile: *Master Terrazzo Technologies (epoxy terrazzo); Granicor (stone); Acme Floor Company (end-grain wood block)*

Custom benches: *Noel Designs*

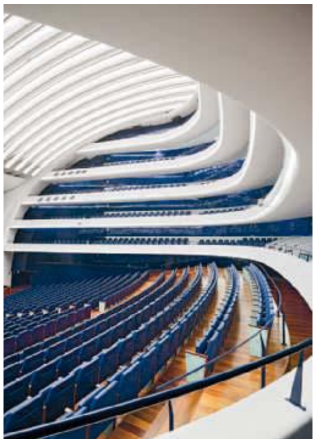
Interior ambient lighting: *Edison Price Lighting; Nulux; C.W. Cole and Company*

Elevators: *ThyssenKrupp*

Plumbing: *Duravit; Toto*

Custom floor grilles and metal work: *A. Zahner Company*

Custom bar and cable railings: *The Bratton Corporation*



REINA SOFÍA PALACE OF THE ARTS

Valencia, Spain

(page 102)

Sources

Structural system: *Montcor; Emesa; Treycal*

Glass curtain wall: *Fasin Glass*

Concrete: *Hormicemex*

Roofing: *Gevasa, Mapsa (elastomeric); Talleres Centrales de Acciona (metal); Acieroid (aluminum siding)*

Windows: *Blasco Carpinteria y Madera (wood); Treycal (steel); Fasin Glass (aluminum)*

Glazing: *Berca Cristalieria*

Doors: *Fichet Carpentry (metal, wood); Ramón Gabriel (stainless steel)*

Plaster paneling: *Panegen*

Broken ceramic wall tile: *Renau Tiling*

Flooring: *Compari (stone); Tecnipark (wood)*

Lighting: *Electrocimbra*

Conveyance: *Kone*

Plumbing: *Fonsa Installations*

Climate control: *ECI*

Building security: *Honeywell*

Landscaping: *Dalmau*

Fire-safety system: *Unisersa*

OLYMPIC SCULPTURE PARK

Seattle, Washington

(page 110)

Sources

Mechanically stabilized earth: *SierraScape*

Corrugated-stainless-steel panels: *McKinstry*

Aluminum curtain wall: *Kawneer*

Mirror frit glass: *Eckelt Glas GmbH*

Precast-concrete panels: *Con-Force*

Custom resin tabletops and counters: *ATTA*

Custom metal furniture fabrication: *Company K*

Welded-wire-mesh handrails and guardrail: *Ametco Manufacturing Corporation*

Custom bollards: *D'ac Lighting*

Exhibition and architectural track lighting: *Litelab Corporation*

Lighting controls: *Lutron*

NEW MUSIC BUILDING, MCGILL UNIVERSITY

Montreal

(page 118)

Sources

Glass curtain wall: *Gamma*

Zinc cladding: *V.M. Zinc*

Prefabricated concrete panels: *Tremca*

Roofing: *Bakor*

Glazing: *PPG*

Doors: *Metaux Tremblay*

Hardware: *SOSS*

Cabinets and custom woodwork: *Polybois*

Aluminum panel paint: *PPG Duranar*

Painted concrete: *Chemor*

Insulation: *Roxul*

Toilet accessories: *Bobrick*

Interior ambient lighting: *Peerless*

For more information on these projects, go to Projects at **architecturalrecord.com**.

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Gilroy High School Gilroy, CA
Kasavan Architects

Sir Francis Drake High School San Anselmo, CA
Deems Lewis McKinley, Architecture
Brett Drury Photography

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K-12 SCHOOLS

Making the Grade

A sampling of recent school projects looks beyond satisfying the demand for classrooms and demonstrates an uncommon responsiveness to context and students' needs.

By Joann Gonchar, AIA

There is no question that the design of school facilities represents a huge and increasingly important opportunity for architects. Just one measure of the size of this market is the dollar value of construction starts, which rose from $9.8 billion in 1990 to $29.3 billion in 2005, a 199 percent gain, according to a study by McGraw-Hill Construction Analytics released in January.

Future investment naturally depends on financing, but also on enrollment. According to statistics cited in the McGraw-Hill study, the number of students in grades K-12 jumped by 8.5 million between 1990 and 2003, reaching 55 million—an almost 18 percent increase. Although growth is expected to slow through 2015, an additional 260,000 students will still be entering U.S. schools annually. If these projections hold, the country will need more than 10,000 new classrooms each year.

The volume and speed required to keep pace with this tremendous demand may be partly to blame for the blandness that has characterized so many school buildings. The focus on creating new school capacity quickly, along with tight budgets and district design guidelines that sometimes specify everything from classroom configuration to the color of paint on the walls, seems to have left little room for innovation.

However, if the many worthwhile projects reviewed for this Building Types Study are any indication, schools are evolving. Just a small sample—only three schools—of the submitted projects appears on the following pages. They represent inventive solutions to very different design problems. But all demonstrate an uncommon sensitivity to the needs of their unique constituencies and their buildings' surroundings.

On a challenging site in Los Angeles, Daly Genik has created an insular, but not isolated, charter high school dedicated to educating immigrant and minority children. In New York City, Platt Byard Dovell White's Reece School provides a supportive setting for students with emotional disorders and learning disabilities, while responding to the dense Upper East Side environs. And for the Rosa Parks Elementary School, in suburban Redmond, Washington, Mahlum Architects has made the most of the site's natural attributes.

Our Web site presents many more projects, including Kieran Timberlake Associates' environmentally ambitious expansion of Washington, D.C.–based Sidwell Friends Middle School, built around a constructed wetland (see the technology story on page 149). Sidwell, along with the other schools examined in print and on the Web, demonstrates that architects are creating buildings that do more than merely accommodate the influx of new students. ■

CAMINO NUEVO HIGH SCHOOL

Los Angeles, California

Daly Genik Architects' inventive solution for a difficult urban site creates a school that both responds to, and is sheltered from, the frenetic activity of the neighborhood.

ROSA PARKS ELEMENTARY SCHOOL

Redmond, Washington

Taking its cues from the natural environment and the community, Mahlum Architects worked with a vocabulary of multistory spaces, sheltering overhangs, and grassy courtyards to tie the building to its surroundings.

REECE SCHOOL

New York, New York

With attention to color, materials, and scale, Platt Byard Dovell White Architects has designed an inviting school building that engages students' minds and senses.

ONLINE: View additional K-12 schools, including the Sidwell Friends Middle School, at **architecturalrecord.com/bts/**. Submit your K-12 project to **construction.com/community/gallerylist.aspx**.

PHOTOGRAPHY: © TIM GRIFFITH (TOP); BENJAMIN BENSCHNEIDER (MIDDLE); JONATHAN WALLEN (BOTTOM)

One: CAMINO NUEVO HIGH SCHOOL

Los Angeles, California

Daly Genik transforms an awkward and almost unusable site in a gritty section of the city into a dynamic environment for learning.

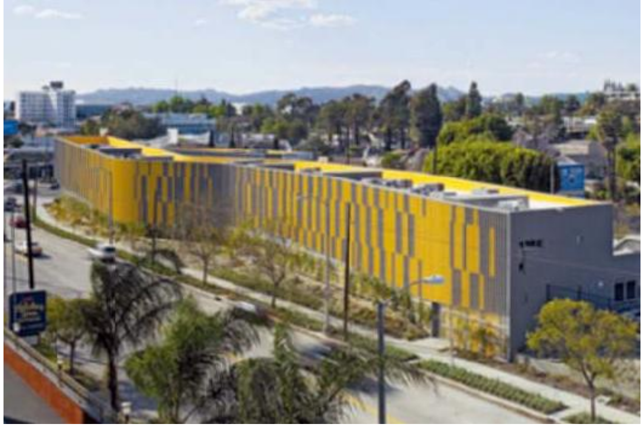
By Sam Lubell

Architect: *Daly Genik Architects— Kevin Daly, AIA, principal in charge; Irena Bedenikovic, Stephen Bohne, Tomaso Bradshaw, Patrick McEneany, Jared Ward, Aaron Whelton, project team*
Client: *Pueblo Nuevo Development*
Consultants: *Tsuchiyama, Kaino, Sun & Carter (mechanical and plumbing); Konsortum1 (electrical); Pfeiler and Associates (civil); John Labib+Associates (structural)*
General contractor: *Turner Construction/SPD*

Size: *29,945 square feet*
Cost: *$13 million*
Completion date: *November 2006*

Sources
Windows: *Arcadia*
Locksets: *Corbin-Russwin*
Resilient flooring: *Armstrong*
Plastic laminate: *Wilsonart*
Cabinet work: *Pacific Woodworks*
Paints: *Frazee*
Plumbing fixtures: *American Standard*

ONLINE: Rate this project and access additional sources at **architecturalrecord.com/bts/**.



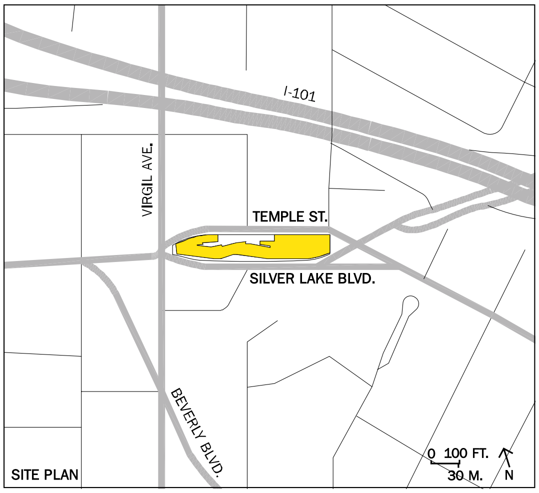
Where else but in Los Angeles would you expect to find a parcel of land that is essentially a large traffic island used as a site for a school? Exactly such a site was selected by the Camino Nuevo Charter Academy for its 500-student high school, opened last fall in Historic Filipinotown. The complex sits on a long, narrow strip of land in the shadow of U.S. 101 and bounded by four busy streets. Given these frenetic surroundings, and the odd shape of the site, the architects' challenge was "to find recoverable pieces of urban space" without isolating the school from the neighborhood, says Kevin Daly, AIA, partner of Santa Monica–based Daly Genik Architects.

Sam Lubell, ARCHITECTURAL RECORD's former news editor, is the California editor of The Architect's Newspaper.

The academy was launched in 2000 by Pueblo Nuevo Development, a nonprofit community development corporation. It primarily serves children who live in the MacArthur Park neighborhood, one of the poorest in the city. Daly's firm had already designed the academy's elementary and middle schools [RECORD, February 2001, page 134, and March 2003, page 144], and is now working on a preschool.

Program

For the high school, the architects were required to fit a 30,000-square-foot building that included 18 classrooms, a media center, and administration areas onto just over an acre of land. In addition, they needed to provide space for outdoor activities and parking, all while staying within a tight budget of less than $300 per square foot.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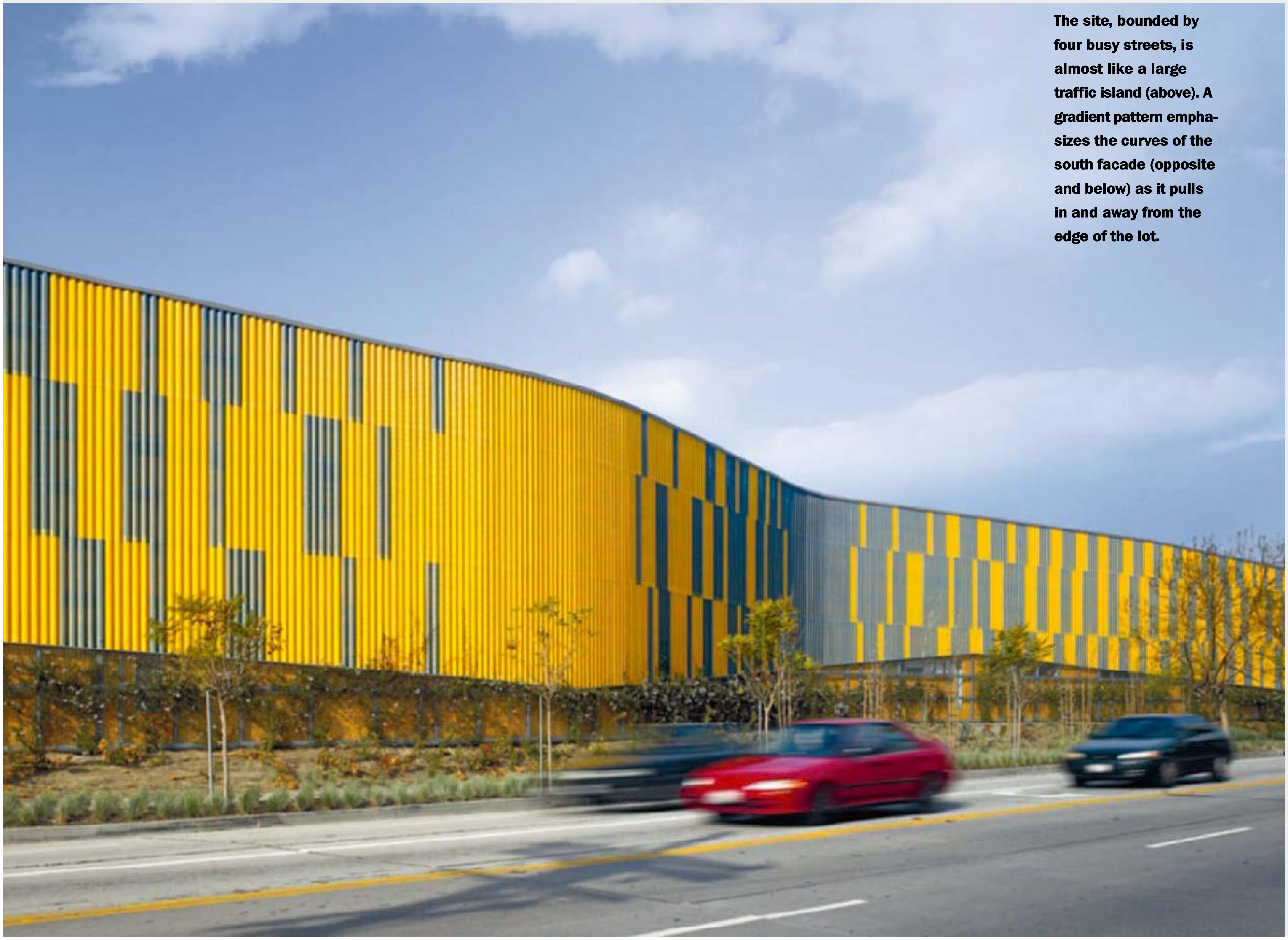
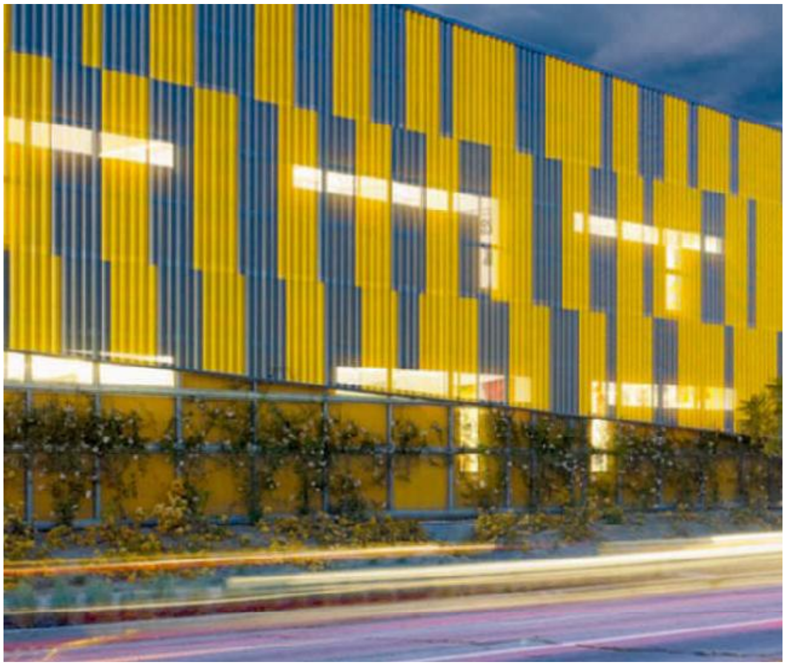
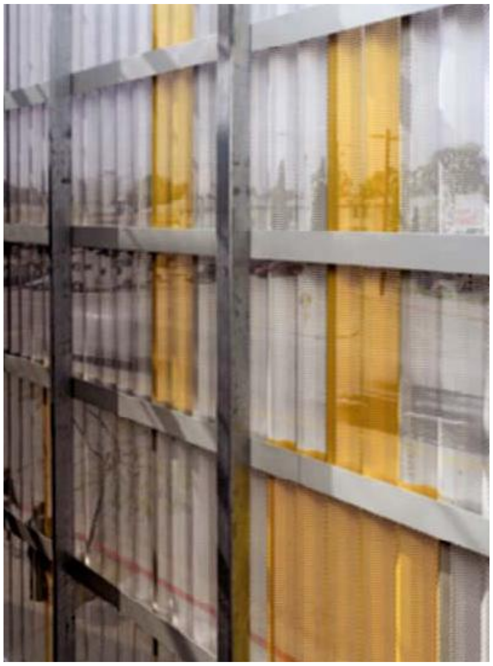
SITE PLAN

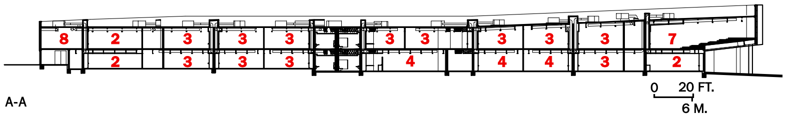


The site, bounded by four busy streets, is almost like a large traffic island (above). A gradient pattern emphasizes the curves of the south facade (opposite and below) as it pulls in and away from the edge of the lot.





The perforated and corrugated panels screen, but do not obstruct, views of the neighborhood (above). The bottom edge of these panels is slightly wavy, mimicking their curvature in plan, and pulling away from the ground plane to provide space for metal trellises and climbing plants.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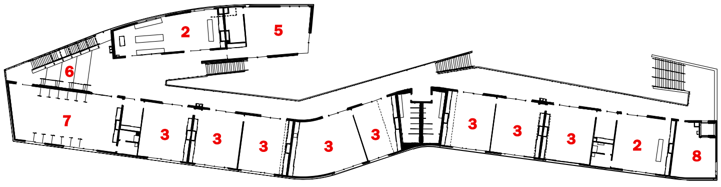
SECTION A-A

1. *Administration*
2. *Science lab*
3. *General classroom*
4. *Arts classroom*
5. *Media center*
6. *Outdoor amphitheater*
7. *Auditorium*
8. *Storage*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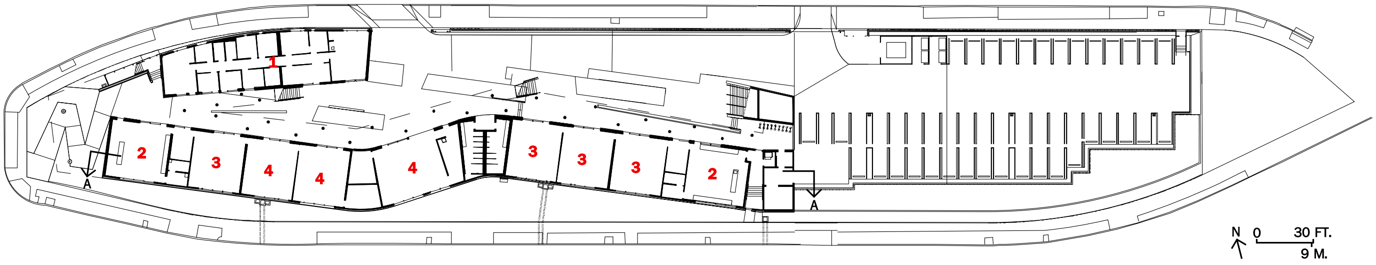
SECOND FLOOR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FIRST FLOOR

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MEDI AL TER

On the second level of the courtyard, an outdoor amphitheater (below) provides space for socializing, performances, or class meetings. Directly below the amphitheater, at street level, is a small sheltered area (left) where students can wait for rides home.

Solution

The firm addressed these demands by designing a pair of two-story structures. Along the site's southern edge, a long building with a snakelike plan houses classrooms. To the north side is a smaller building devoted primarily to administrative functions.

Continuous corrugated-metal panels clad the buildings' concrete-block bearing walls. On the primary street elevations, the panels cover the windows to limit penetration of street sounds and provide sun control, but are perforated to allow views out. The facades curve, breaking up the buildings' bulk and mimicking the automobile movement around the school.

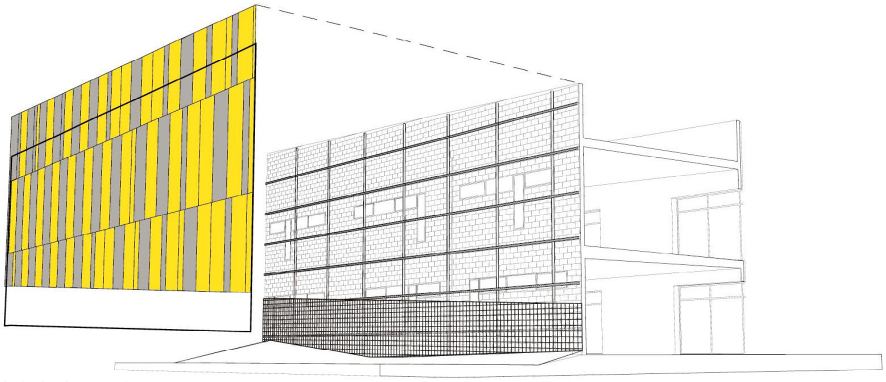
These facades are painted yellow and gray in a pattern that uses more yellow where the walls push outward and less where they are concave, to emphasize their curves. In some places, the south facade pulls away from the lot line, providing spaces for landscaping. To the west, the second floor projects out on columns, creating a sheltered area for students to wait for rides home.

Classrooms open directly onto a courtyard between the two buildings, making this space the school's

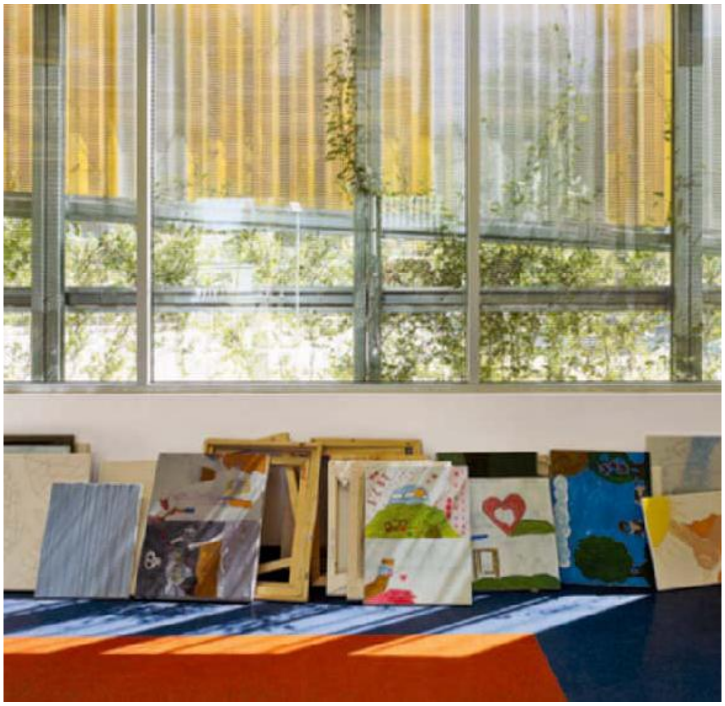
PHOTOGRAPHY: © TIM GRIFFITH

hub. In this zigzagging area filled with tables and plants, students file in and out of classes, eat lunch, play impromptu soccer games, and attend schoolwide meetings. On the second floor, overhanging balconies provide circulation and shade. The courtyard opens to the north—where traffic is the least busy—allowing views toward the neighborhood.

In the classrooms, open-web joists and metal deck supporting the slab above are left exposed. Small windows on the south let in dappled light through the facade's perforations. North-facing windows along the courtyard are larger and free of shading devices, making the rooms feel open and bright, and helping maintain a connection to the rest of the school.



SECTION / ELEVATION

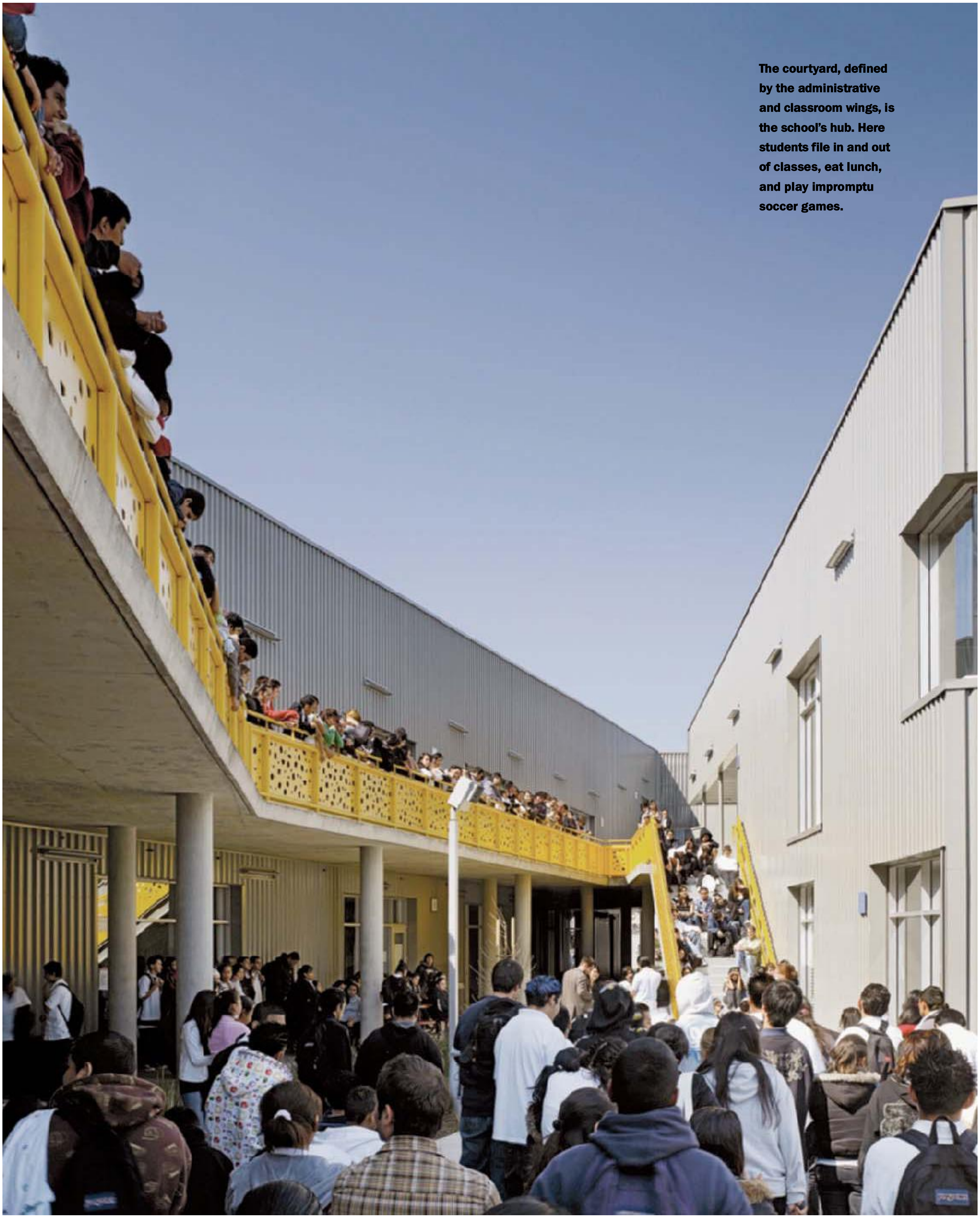


North-facing classroom windows (left) are large and open, helping the rooms maintain a connection to the school's courtyard. Perforated and corrugated metal panels (below and drawing, above) screen smaller windows facing the street to provide sun control and help limit the penetration of traffic noise.

Commentary

The architect and the design-savvy client have together approached the school as a work in progress. Both were open to changes throughout the design process, and even after completion. For example, a two-lane drop-off area just north of the courtyard has become a recreation area. The firm is investigating ways to activate this space and provide shading. The school now uses city parks and other gym facilities for more organized sports, but hopes to acquire another 1-acre site across the street for such activities.

Considering the strange configuration of the site, the architect's solution is surprisingly simple and effective. Although the school, especially the long south facade, can seem a bit intimidating from the street, it is dynamic and a good match for its gritty surroundings. This facade system, along with the school's layout, provides protection from the sun and helps limit penetration of street noise, without shutting the school off from the neighborhood. The courtyard, in particular, is a notably important and successful aspect of the scheme. "It helps us all stay connected and helps us collaborate," says Steve Seaford, the school's principal. "We've developed our sense of community here." ■



The courtyard, defined by the administrative and classroom wings, is the school's hub. Here students file in and out of classes, eat lunch, and play impromptu soccer games.

Two: ROSA PARKS ELEMENTARY SCHOOL

Redmond, Washington

Mahlum Architects designs a building that is well-suited to its natural setting and in sync with the desires of an emerging community.

By Joann Gonchar, AIA

Architect: *Mahlum Architects—Gerald Reifert, AIA, principal in charge; Anne Schopf, FAIA, design principal; Mitchell Kent, AIA, project manager; David Mount, AIA, project architect*
Client: *Lake Washington School District*
Consultants: *Stantec Engineering (mechanical); Coffman Engineering (electrical); Couglin Porter Lundeen (civil and structural); Weisman Design Group (landscape); The Greenbusch Group (acoustic)*
General contractor: *SpeeWest Construction*

Size: *66,402 square feet*
Cost: *$13.7 million*
Completion date: *August 2006*

Sources
Curtain wall: *Kawneer*
Cementitious panels: *James Hardie*
Concrete surfacing: *RetroPlate*
Resilient flooring: *Johnsonite*
Cabinetwork: *Westmark Cabinets*

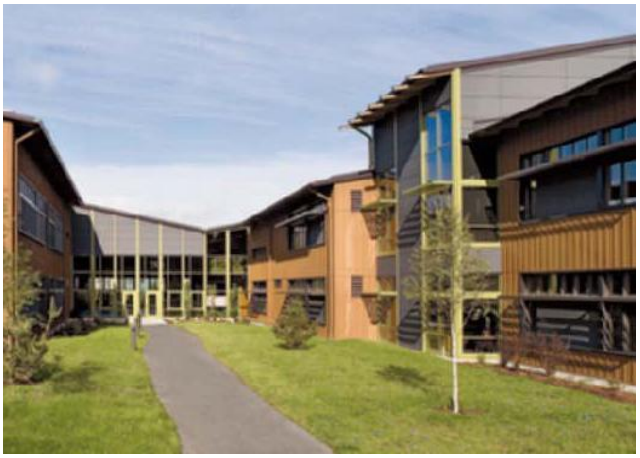
ONLINE: Rate this project and access additional sources at **architecturalrecord.com/bts/**.

In late 2003, when Mahlum Architects began designing the Rosa Parks Elementary School in Redmond, Washington, families were just starting to move into the 1,000-acre mixed-use development it would serve, and the faculty had yet to be hired.

Program

With the school's stakeholders still largely undefined, the Seattle-based architects would have to rely on past experience with their client, Lake Washington School District, to refine the program. However, some of the development's early homeowners expressed a desire for a building that reflected a "national parks" theme. The developer had used the term in its promotional material to describe the community's ambience and convey the importance of its natural amenities, including nature trails, wetlands, and parks.

Although the architects worried about how they would satisfy this request and avoid creating a historically referential building, they took the residents' wishes seriously. They decided to work with a Modernist vernacular to create a school tied to its surroundings. By employing multistory spaces, sheltering overhangs, and a palette of earthy browns and grays accented with vibrant green, they sought to imbue the building with color and character.

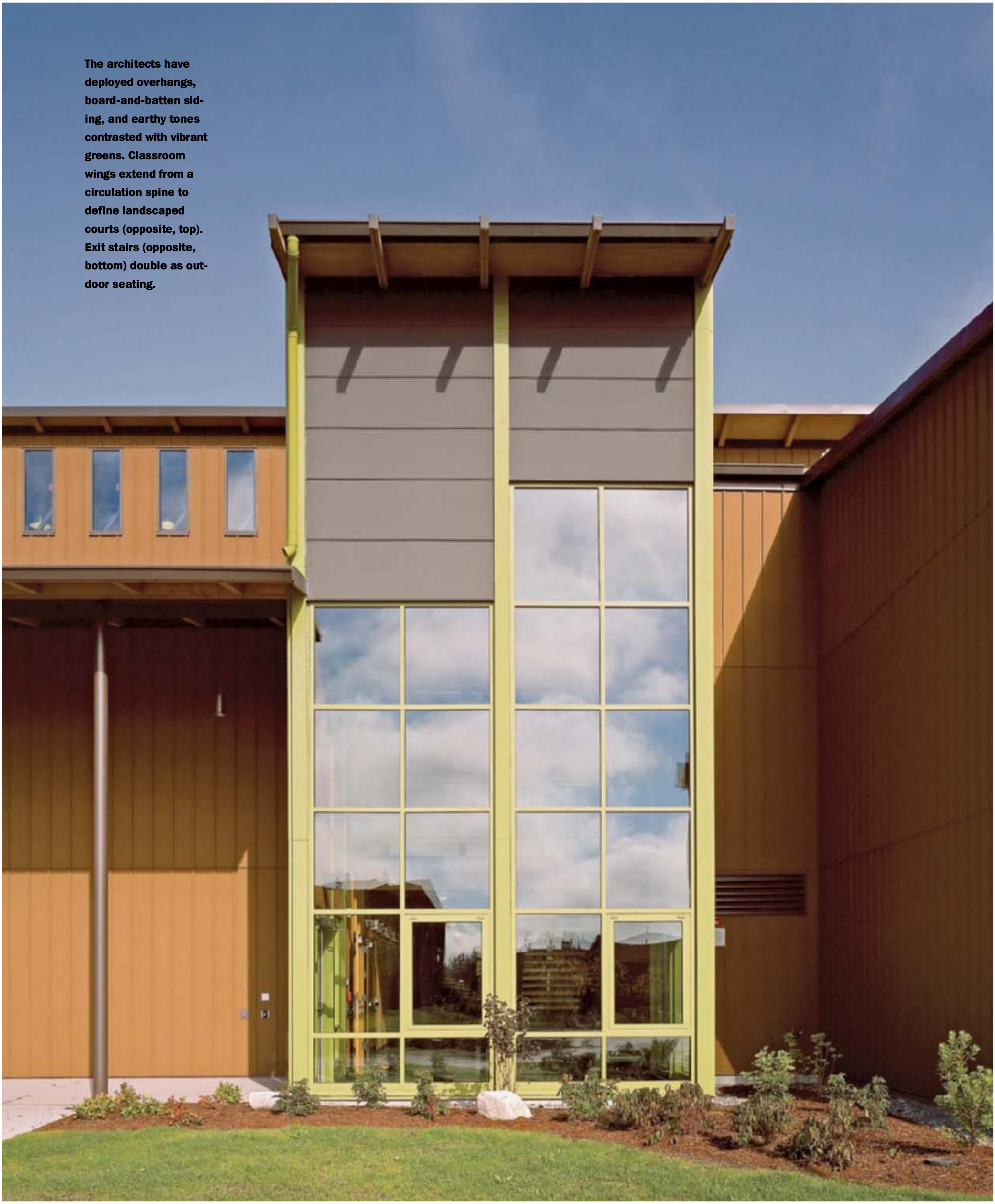


The program required that the 550-student school would be divided into more intimate "learning communities"—classrooms clustered around a shared space intended for team teaching, group learning, or individual study. The model reflects Lake Washington's pedagogical and facilities-use philosophy based on flexible spaces that can accommodate multiple teaching styles.

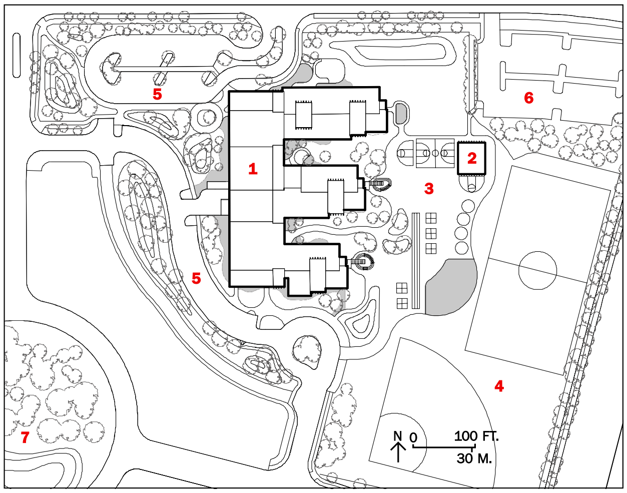
Solution

The resulting 66,000-square-foot school, opened in fall 2006, is composed of a series of shed-roofed structures clad with cement-fiber-board panels. Along its western edge are administrative offices and shared facilities, such as the library, the school commons, and the gymnasium. On the east side of the building, one- and two-story wings contain the learning communities. They define courtyards planted with native grasses and wild flowers.

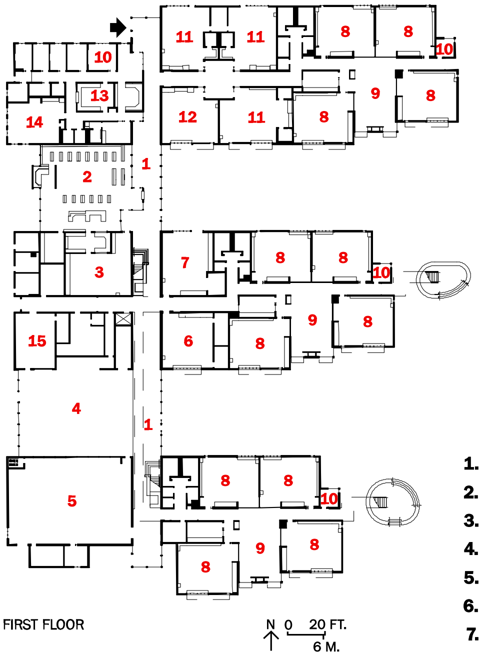
PHOTOGRAPHY: © BENJAMIN BENSCHNEIDER



The architects have deployed overhangs, board-and-batten siding, and earthy tones contrasted with vibrant greens. Classroom wings extend from a circulation spine to define landscaped courts (opposite, top). Exit stairs (opposite, bottom) double as outdoor seating.



1. *Elementary school*
2. *Covered play area*
3. *Outdoor play area*
4. *Playing fields*
5. *Parking/drop-off*
6. *Park and ride*
7. *Community park*



FIRST FLOOR

1. *Gallery*
2. *Library*
3. *Technology*
4. *Commons*
5. *Gymnasium*
6. *Music*
7. *Art/science*
8. *Classroom*
9. *Activity area*
10. *Conference*
11. *Kindergarten*
12. *Resource room*
13. *Administration*
14. *Staff room*
15. *Kitchen*

Classrooms have generous south- or north-facing glazing. Carpeting helps provide acoustic control.

The gallery facade is transparent and permeable, with an aluminum storefront system that allows views to the east of playing fields and a wooded area beyond. Students and staff can also see out to the west, through the commons and the library. The gallery volume is open and bright, with an exposed roof structure of construction-grade plywood and open-web joists. Instead of an enclosed second-floor hallway, a bridge connects the upper-level learning communities and seems to float above the gallery's polished concrete floor.

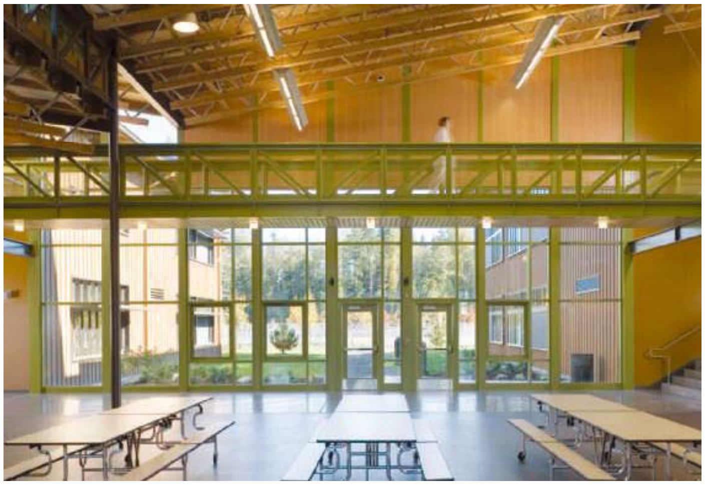
From the bridge, one example of the architects' inventive handling of circulation spaces is evident. From this vantage point, children can see outside and also view the activity in the school's commons. Similarly, the exterior stairs at the end of each wing are more than a means of fulfilling exiting requirements. The open-riser steel stairs land on a sculptural concrete pad that doubles as seating, creating a place to "see and be seen," says Anne Schopf, FAIA, Mahlum design principal.

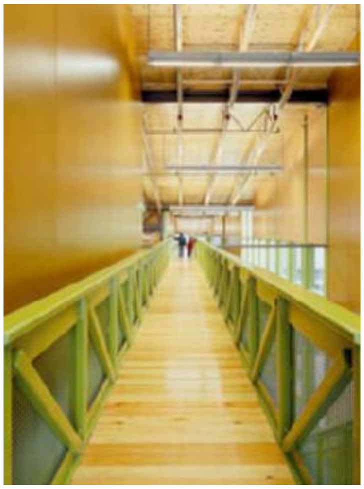
Within the instruction wings, the learning communities are made up of four classrooms grouped around a shared activity area. Glazed sliding doors provide a physical and visual connection between the two types of spaces, allowing teachers to supervise both simultaneously. Carpet in the classrooms and rubber tile in the shared areas provide both acoustic control and surfaces friendly to activities like storytelling. These rooms strive to make the most of daylight with generous north-facing glazing or south-facing glazing and light-shelves.

Commentary

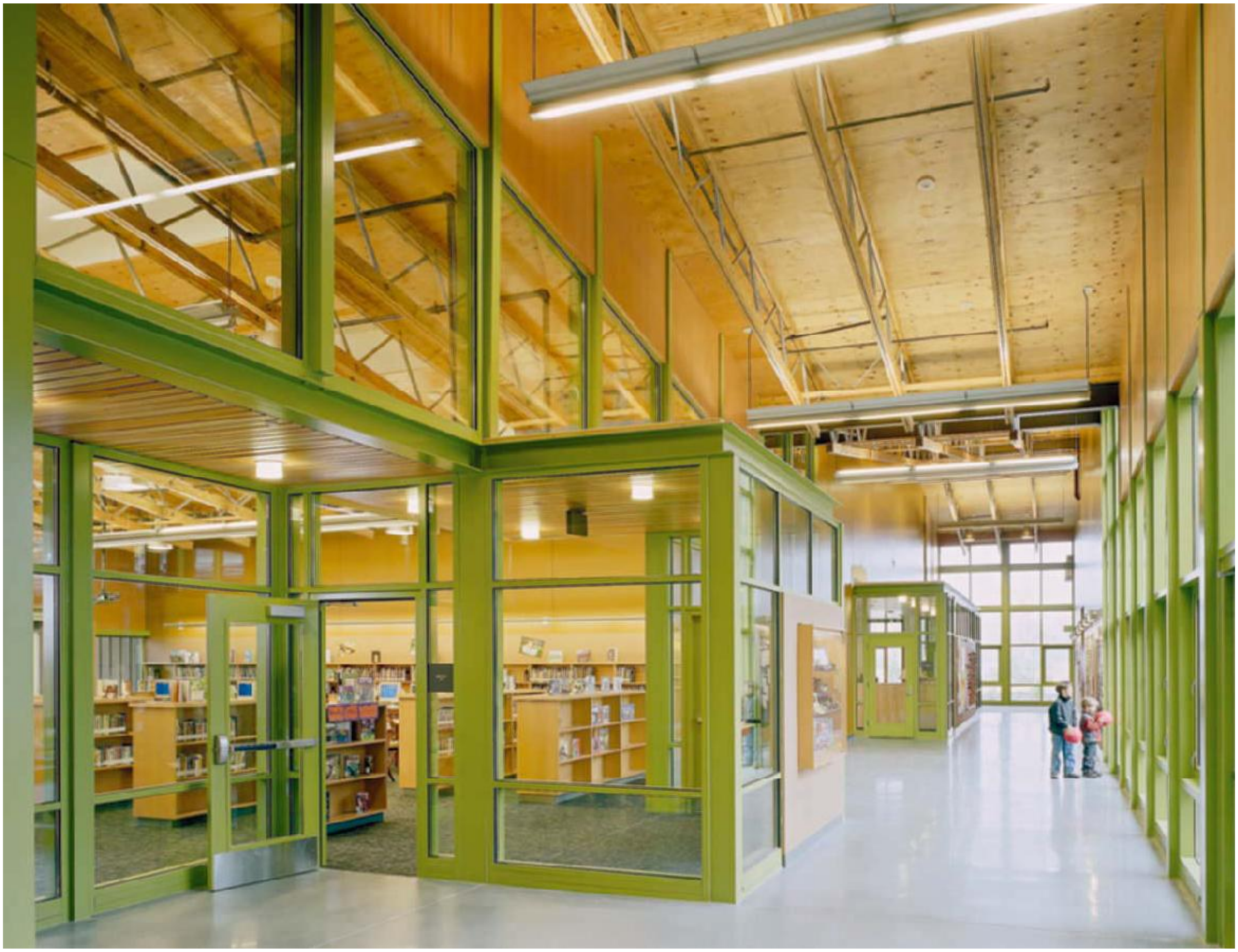
The daylighting is one of the building's few disappointments. Although the classroom fixtures are tied to a daylight dimming system, teachers regularly override it. During late-morning classes on a sunny mid-May day, window shades were drawn and overhead lights on in most classrooms. However, this problem is likely the result of inadequate teacher orientation, rather than a design deficiency, says Forrest Miller, the district's director of support services.

Despite this operational glitch, the project's achievements are considerable. The architects have deftly handled space and judiciously exposed structural elements to create an environment that is clean and contemporary without being cold. The designers have also skillfully satisfied the community's desires without resorting to more predictable historically allusive materials, such as stone veneer or heavy timber. The building is firmly rooted to its surroundings and promotes both teaching and learning. ■





The exposed roof structure of the two-story gallery (this page) helps maintain its open and bright character. Polished concrete floors reflect light coming in through storefront windows. Instead of an enclosed hallway, a bridge connects the upper-level rooms. From this vantage point, students can view activity in the school commons.



Three: THE REECE SCHOOL

New York City

Platt Byard Dovell White creates an inviting building finely tuned to the needs of its occupants and neighbors.

By David Sokol

Architect: *Platt Byard Dovell White Architects—Ray H. Dovell, AIA, administrative partner; Elissa C. Icso, AIA, project manager; Charles Platt, FAIA, Matthew Mueller, AIA, Steven Dodds, Naomi Touger, project team*
Client: *The Reece School*
Consultants: *Anastos Engineering Associates (structural); Simon Rodkin (m/e/p); Cosentini Associates (lighting); Shen Milson Wilke (acoustical); GTA Engineering (geotechnical)*
General contractor: *The Stegla Group*

Size: *21,040 square feet*
Cost: *$8.4 million*
Completion date: *June 2006*

Sources
Masonry: *Tri-State Brick*
Curtain wall: *Vistawall*
Glazing: *Oldcastle*
Paints: *Benjamin Moore*
Gymnasium floor: *Gerflor*
Carpet tiles: *Interface*
Casework and cabinetry: *LSI Corporation of America*
Classroom furniture: *KI Educational*

ONLINE: Rate this project and access additional sources at **architecturalrecord.com/bts/**.

Now almost 60 years old, the Reece School was one of the first in New York City to educate children with emotional disorders, learning disabilities, and speech or occupational impairments. It is still a leader in this field. Director Thomas Colasuonno sums up Reece's approach: "However they got here, the pathology is the same, and we deal with it behaviorally, psychopharmacologically, psychodynamically—we deal with it humanely." Since last July, when the city-contracted private elementary school moved into a new 23,000-square-foot building by Platt Byard Dovell White Architects (PBDW), faculty and staff have also counted design among their educational tools.

Program

The school has steadily grown since 1948, when founder Ellen Reece began teaching in her Upper East Side town house. In 1995, the school expanded to an adjacent brownstone. But only five years later, with about 75 students, the school had outgrown its 6,000-square-foot space. Renovation and expansion of the adjoining structures was not a viable option, so the city and Reece teamed up to increase enrollment to 90 and identify a nearby site suitable for a new building.

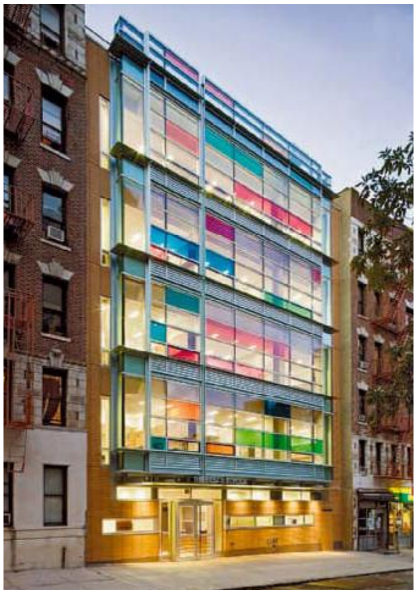
David Sokol is a New York–based freelance writer and regular contributor to ARCHITECTURAL RECORD.

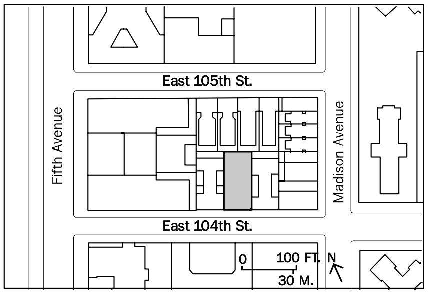
Although the size of the old brownstones was in many ways inadequate, their intimate scale reflected the school's values, says Ray Dovell, AIA, PBDW principal. And in fact, designers learned that Reece students are most comfortable in smaller environments. Accordingly, they made the new classrooms a cozy 300 square feet in order to accommodate six to eight students and two teachers.

In addition to instructional spaces, the new Reece includes what Dovell calls "a world of education," with counselors' and therapists' offices, faculty support spaces, and the school's first lunch room and gym.

Solution

"Mom, they got lockers, just like a real school," Colasuonno remembers overhearing shortly after the new five-story building opened its doors. "Just like a real school" was exactly what architect and client were aiming for. "We're trying to create an environment that is as normal as possible, because every day we are training for the future," Colasuonno says. In one sense, the new facilities alone help accomplish these objectives. Having a lunch room, for

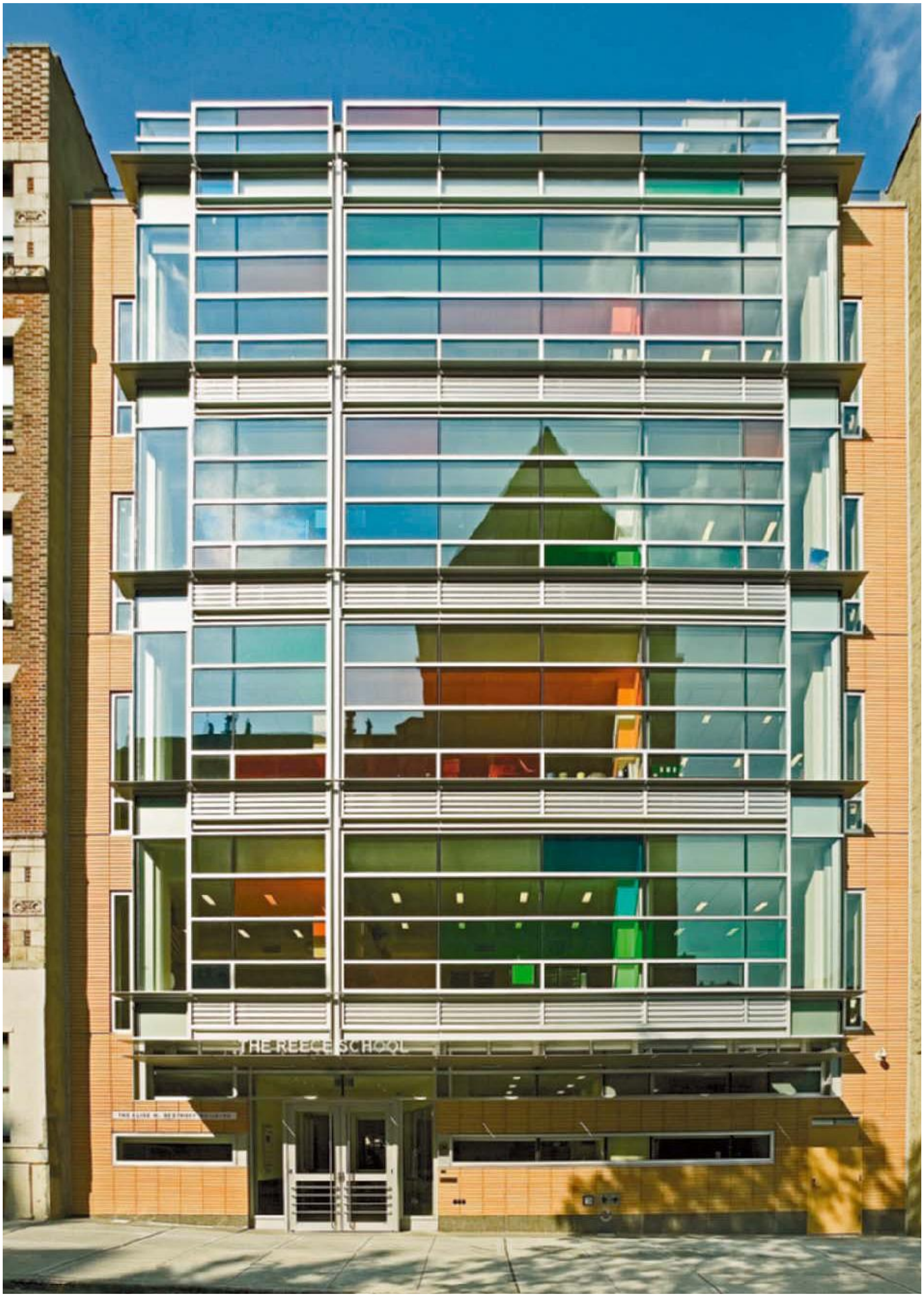




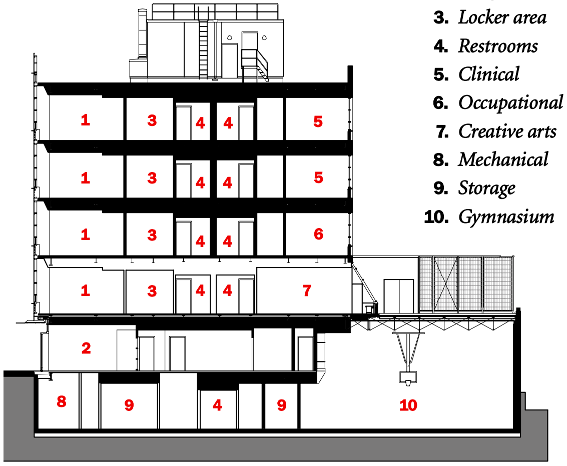
example, prepares Reece graduates for eating in a high school cafeteria.

Another priority for the client was making the building responsive to its surroundings. "It's very important for the Reece School to be a good neighbor," Dovell says, referring

A four-story volume, enclosed in a metal-and-multicolored-glass curtain wall, cantilevers slightly from the street elevation to meet the facade planes of the adjacent buildings (this page and opposite). The glazing colors help students differentiate their classrooms, whether viewed from the street or the interior.



PHOTOGRAPHY: © JONATHAN WALLEN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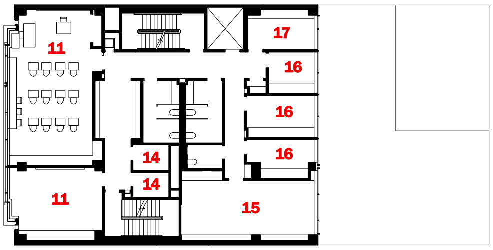
SECTION A-A

1. *Classroom*
2. *Reception/security*
3. *Locker area*
4. *Restrooms*
5. *Clinical*
6. *Occupational therapy*
7. *Creative arts*
8. *Mechanical*
9. *Storage*
10. *Gymnasium*

The lighting in the art room (below) is arranged to create a playful reflected ceiling plan. It is located at the rear of the building (right) so that it receives north light. The room has direct access to an outdoor play terrace.

1. *Reception/security*
2. *Waiting room*
3. *Nurse's office*
4. *School store*
5. *Business office*
6. *Copy/support*
7. *Director's office*
8. *Multipurpose room*
9. *Electrical*
10. *Library*
11. *Classroom*
12. *Occupational therapy*
13. *Counseling*
14. *Quiet alcove*
15. *Staff lounge*
16. *Clinical room*
17. *Speech therapy*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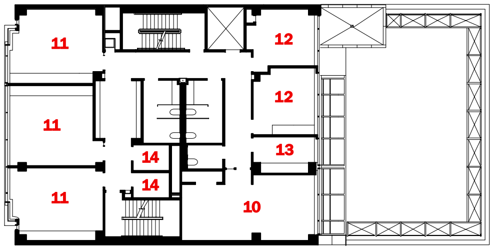
FIFTH FLOOR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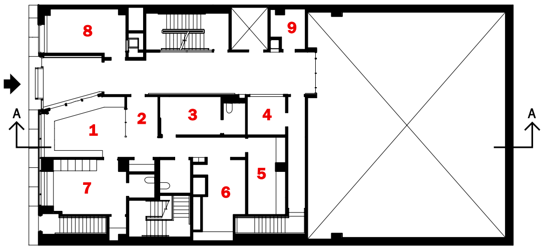
THIRD FLOOR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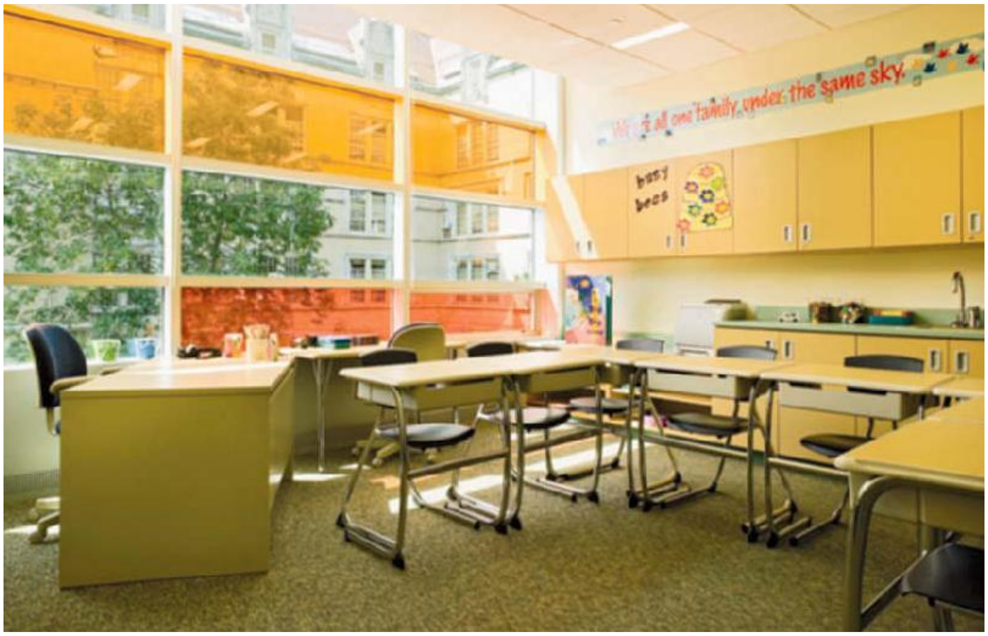
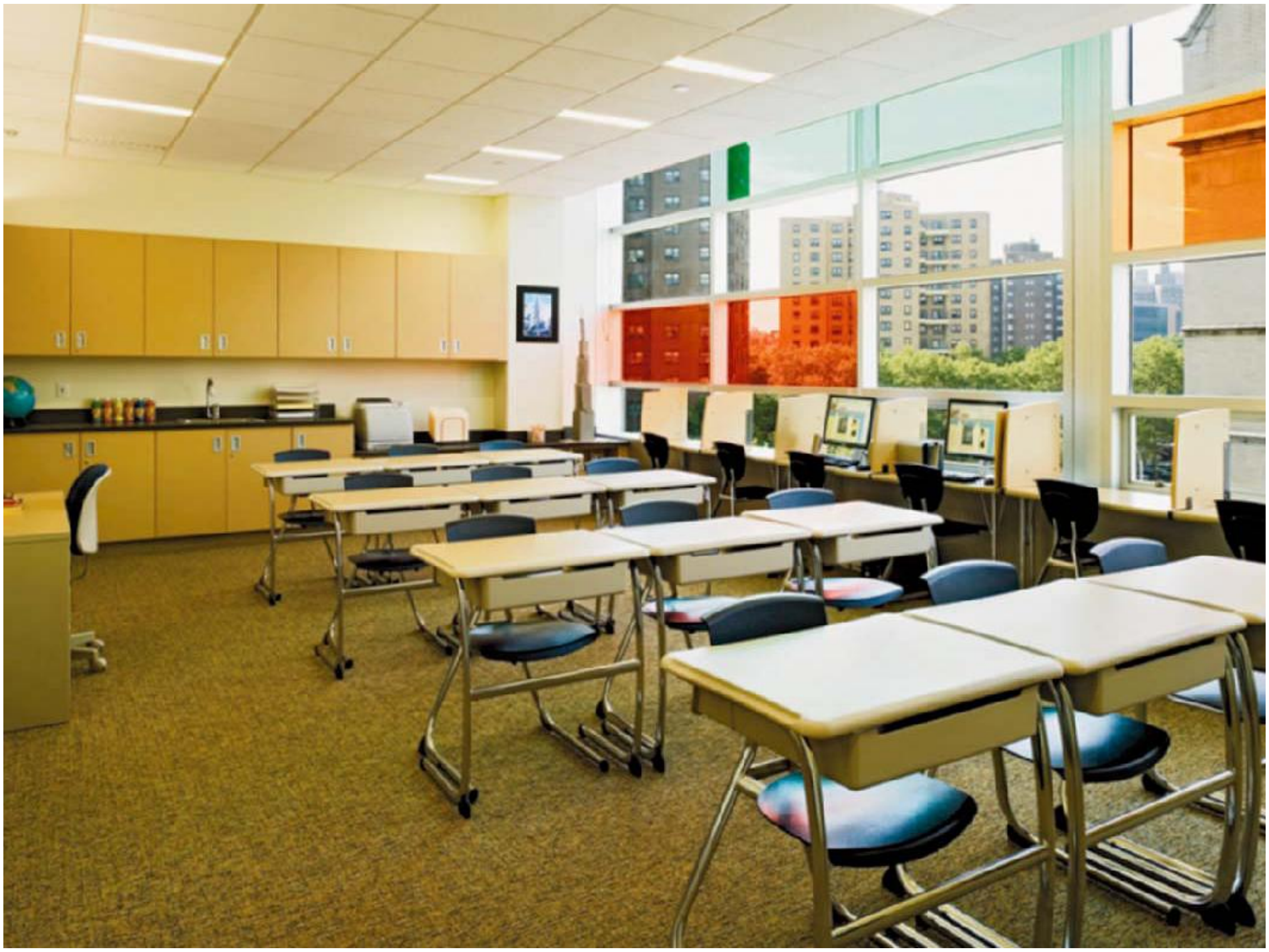
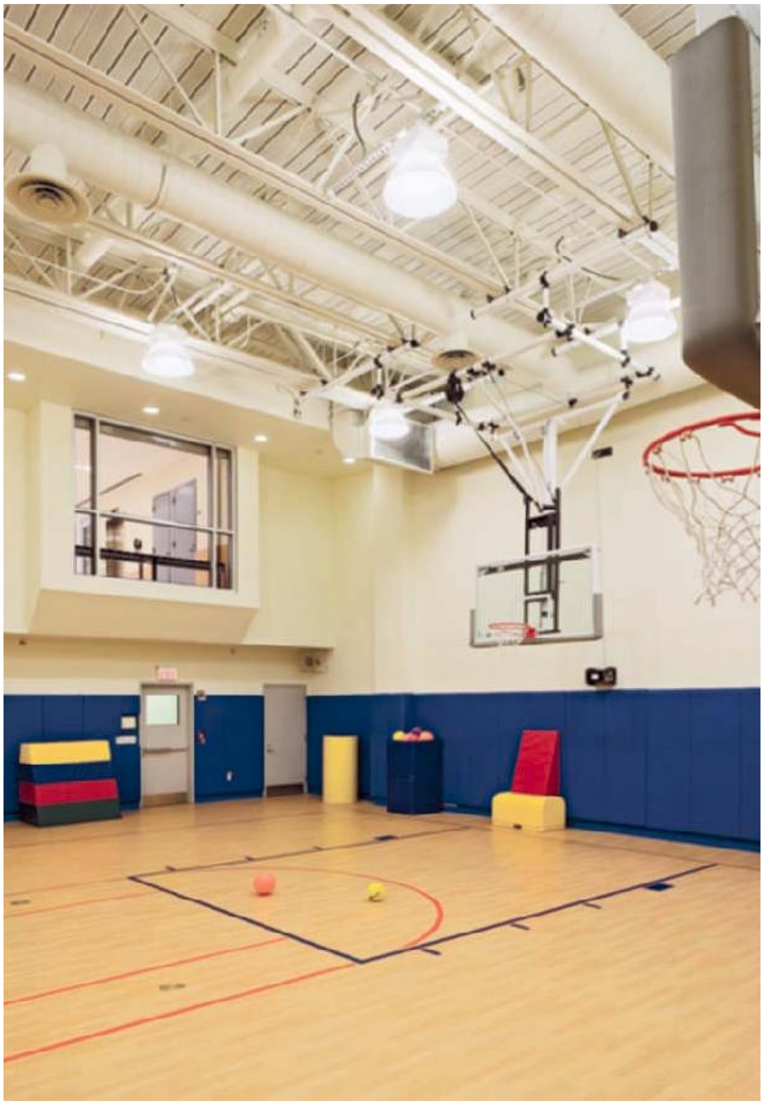
FIRST FLOOR


We're all one family under the same sky.
busy bees

The school's typical instructional space (left) is an intimate 300 square feet and holds about six to eight students and two teachers. However, on the top floor, a classroom for the oldest students is designed for 12 students and two teachers (below). South-facing windows, carpeted floors, and simple but sturdy furnishings and casework contribute to the bright and comfortable environment.





The school's first floor entry hallway (left) is activated with interior windows that provide views into the basement-level gymnasium and the stairwell. The gymnasium floor is covered with a cushioned vinyl material.

to the street elevation, which faces a public school and abuts apartment buildings of similar scale to the east and west. A four-story volume enclosed in a metal-and-multicolored-glass curtain wall projects to meet the facade plane of the adjacent buildings, creating a canopy over a base of contextual brick.

Inside, the entrance hallway terminates in a view overlooking the gym. The upper levels follow a C-shaped plan with color-coded floor material and wall paint to ease orientation. Similarly, the street facade's colored panes of glass help students identify their classrooms from both the street and the interior.

Although the design strives for normality, students' unique needs are reflected in smaller elements, such as the varied use of color. Out of respect for emotional fragility, the fire alarm's unnerving shriek was replaced by a calm ring. The gym floors are covered in a cushioned vinyl material—a forgiving surface for children who frequently fall. Unprogrammed rooms serve as comforting cocoons when a meltdown is unavoidable.

Commentary

The Reece project represents just one example in a mini building boom in schools for children with special needs, and a definitive break from the past. "Particularly in public schools, special-ed classrooms were in the basement, in a trailer, wherever you could make room," says Scott Gaynor, head of the Stephen Gaynor School, another New York City elementary school with a mission similar to that of Reece. "Not much consideration had been given to sound, light, or space." Moreover, he emphasizes that inelegant solutions to providing special-needs kids a room of their own suggested second-class status.

At Reece, PBDW tackled the lessons of this history head-on. The new building, with its expanded program, friendly exterior, and attention to intimacy and interior detail, engages students' senses and minds, helping eliminate the stigma associated with special education. ■

LAKE FENTON HIGH SCHOOL

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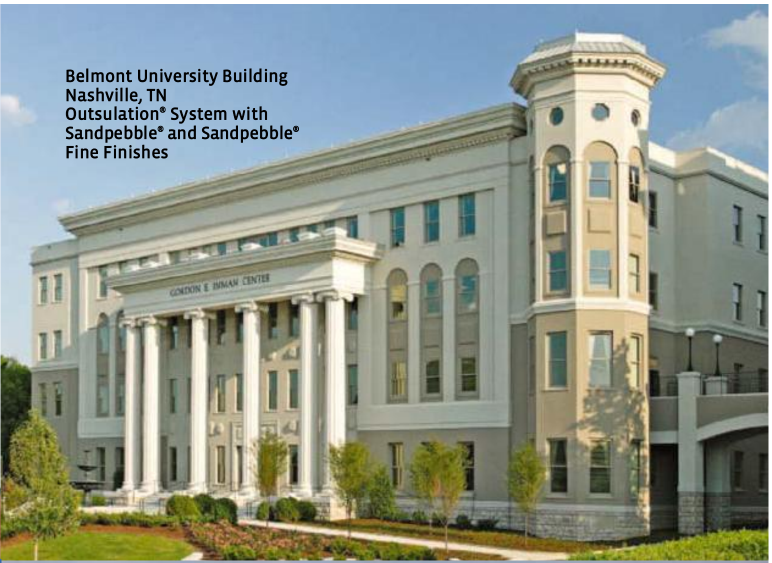
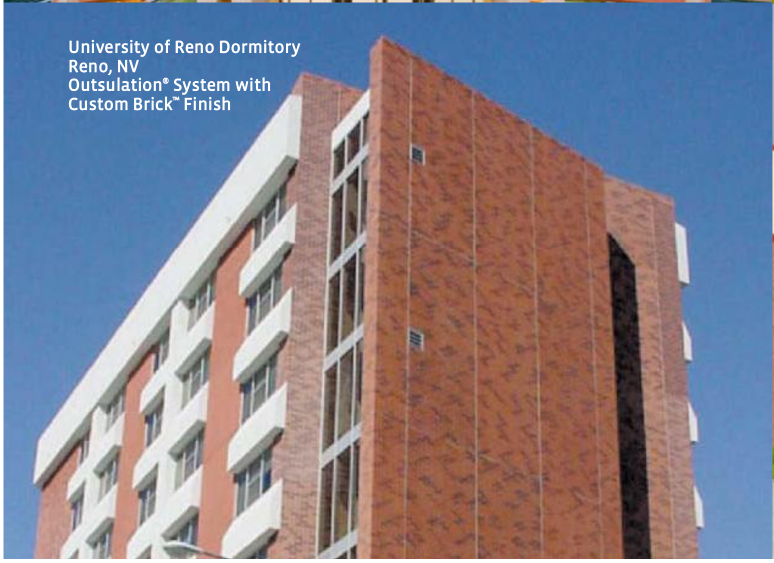
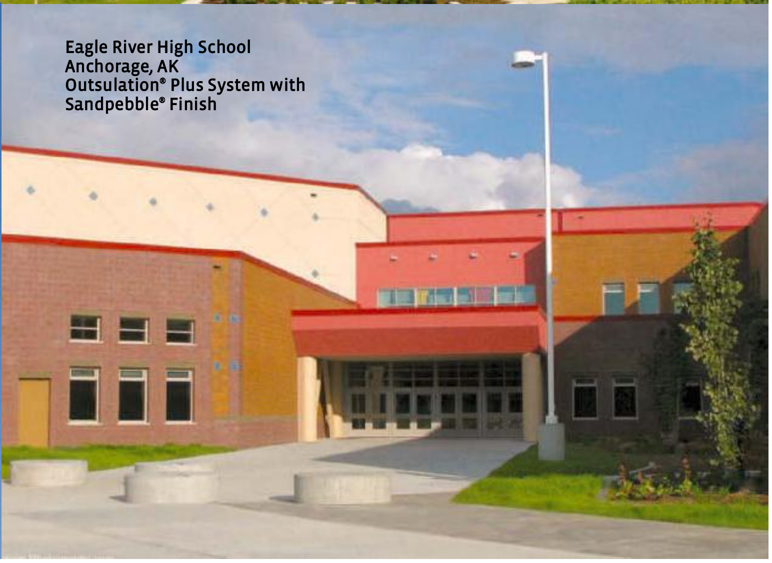


Belmont University Building
Nashville, TN
Outsulation® System with
Sandpebble® and Sandpebble®
Fine Finishes



University of Reno Dormitory
Reno, NV
Outsulation® System with
Custom Brick™ Finish



Eagle River High School
Anchorage, AK
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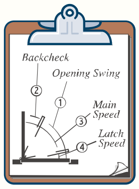

(1) During the opening swing, the LCN closer allows for an easy opening, the type Hollywood producers dream of.

(2) At the end of the opening swing, LCN backcheck prevents the door from slamming into the stop (ouch!).

(3) Through the long closing arc, LCN closers maintain a uniform, reasonable speed. If only they'd do the same for our driving.

(4) The latching arc allows the door to close quietly and firmly. Shhhhh-weet!

We admit it, we're an odd bunch. We eat, sleep and breathe door control. We're control freaks, but in a good way. Because to us, door control is one of the most pressing issues facing society today. Okay, maybe not society, but at least building security and safety. Door closers create the first impression of a facility and must be attractive without compromising quality – like a beauty pageant winner who is actually good at the talent section. So how has LCN been in control of door control for over 125 years? We thought you'd never ask.

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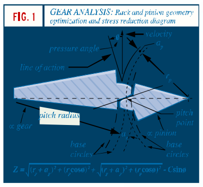
AND NOW FOR SOMETHING THAT MAKES A TAX RETURN SEEM DOWNRIGHT SIMPLE

FIG. 1 *GEAR ANALYSIS: Rack and pinion geometry optimization and stress reduction diagram*



Chances are, you have not seen anything this brain-numbing since tenth-grade chemistry. But this little equation, a mere warm-up for our team of engineers, is the basis behind the precision of LCN closers. It translates to: *Your door opens and closes perfectly every single time.* Now don't go thinking you can take the equation and start your own door closer company. If you happen to have the brain power to understand it, you are likely already happily employed here at LCN.

BUT SO WHAT??!

Why should you care that LCN is a passionate team of rabid door control fanatics? Perhaps you should spend the afternoon watching our closers perform in places like hospitals, office buildings and high schools *(Figure 2)* all over the world. Maybe then you'd understand why we put our closers through a grueling ten-million-cycle test. And who knows? You just might discover the beauty of door closers and become a control freak too.

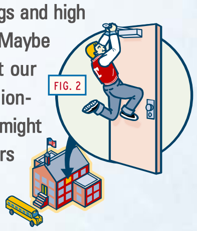


FIG. 2

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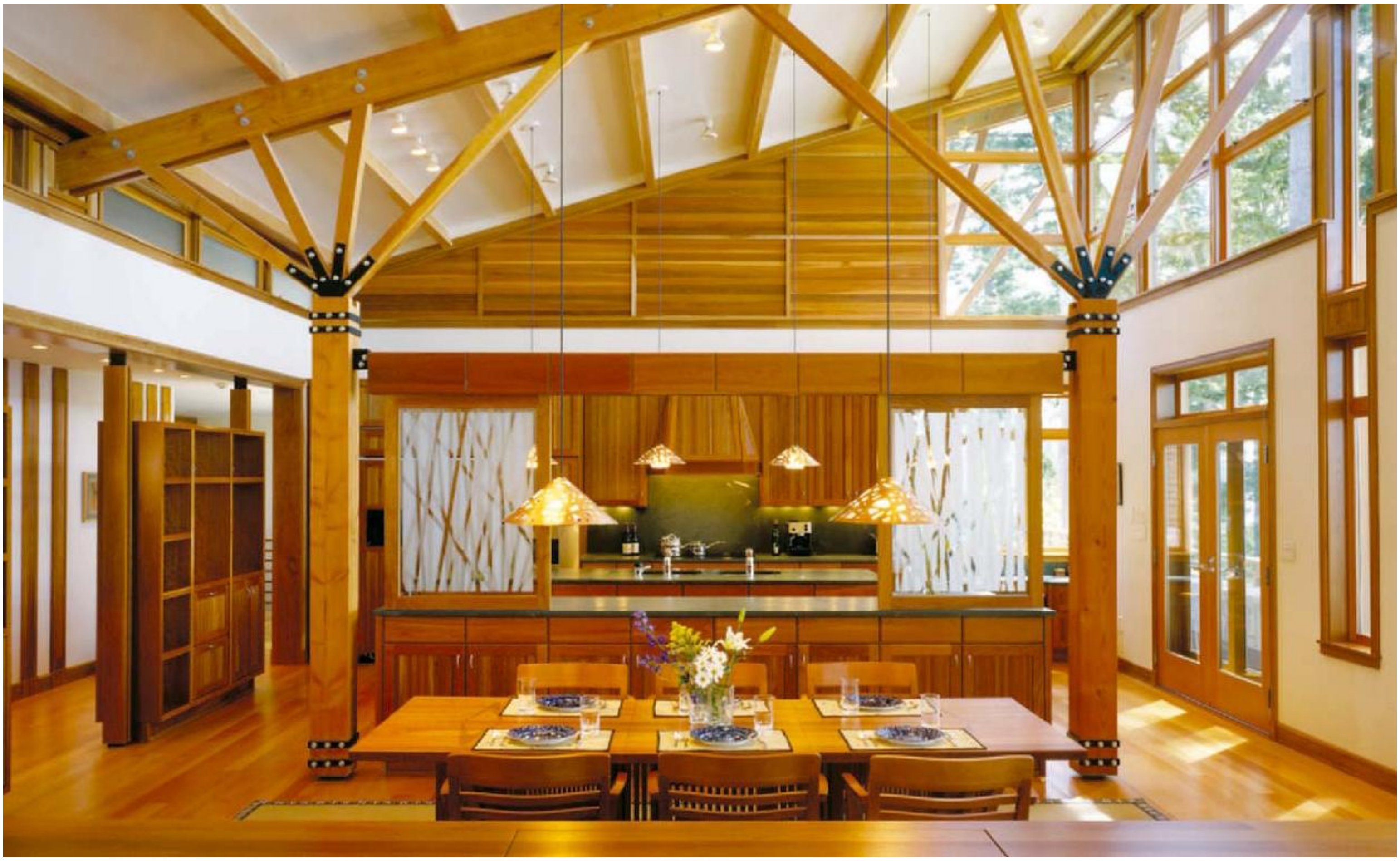

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Toward a Cybernetic Site

THE ARTIST MARY MISS AND ARCHITECTS MARLON BLACKWELL, KIERANTIMBERLAKE ASSOCIATES, AND LAKE/FLATO RADICALLY REINTERPRET SITE CONSTRUCTION IN THREE NEW PROJECTS

By Russell Fortmeyer

The New York artist Mary Miss has proposed building a 1,500-foot bridge across a canal at a new 100-acre art and nature park for the Indianapolis Museum of Art. Miss is working with the New York structural engineer Guy Nordenson on developing the bridge as an innovative viewing device—a central platform for walking across, surrounded on either side with ha-ha's, or walkways depressed 42 inches that form a sort of moat, which visitors can occupy along the bridge's length. Imagine a "W" section through the bridge, with a wider center peak as the main path. The idea is to confront the viewer with nature, lessening the force of architecture by making such things as handrails effectively disappear.

"I'm trying to get people to notice what they take for granted in a landscape, to reveal multiple aspects of the site," Miss says. "The bridge seems to be a platform with no edges—I want you to feel free to see this place as you've never seen it before." In the 1970s, the art historian and critic Rosalind Krauss placed the work of artists like Miss in a new conceptual framework of practice, in an expanded field that included "site construction." For Krauss, these artists did not work in the conventions of sculpture, but in a category that existed between traditional notions of landscape, architecture, and sculpture.

An increasing number of architects and designers embrace this notion of site development—spanning between the traditional roles of architect and landscape architect—embedding a variety of interpretations of site conditions into a new performance-based architecture of sustainable principles. But an architect must be interested enough in this new scope of opportunity, in areas such as groundwater-recharge and wastewater-treatment design, since it falls outside traditional practice.

CONTINUING EDUCATION

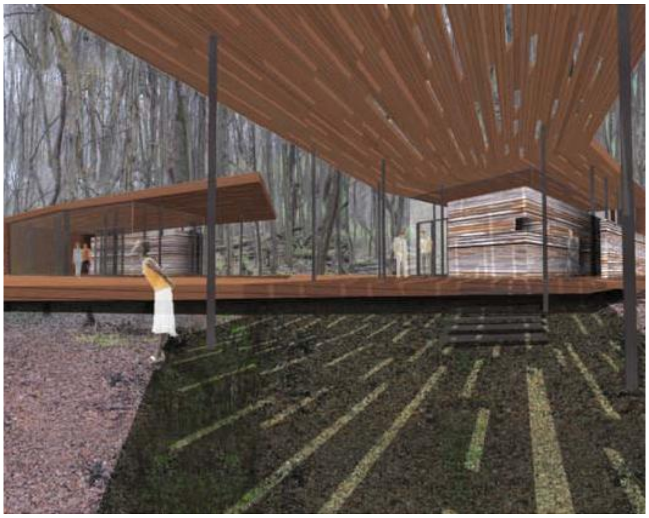
Use the following learning objectives to focus your study while reading this month's ARCHITECTURAL RECORD/ *AIA Continuing Education article. To receive credit, turn to page 156 and follow the instructions. Other opportunities to receive Continuing Education credits in this issue can be found on page 163.*

LEARNING OBJECTIVES

After reading this article, you should be able to:

1. *Explore projects categorized as site constructions.*
2. *Describe the concept of performance-based architecture in sustainable environments.*
3. *Explain how water is managed at various sites.*

For this story and more continuing education, as well as links to sources, white papers, and products, go to **architecturalrecord.com/tech/**.



The proposed Interpretive Center at the Indianapolis Museum of Art.

RENDERING: COURTESY MARLON BLACKWELL

The site of the Indianapolis project lies within an elbow of the White River, which runs from north to south, looping around the western edge of the park. A 35-acre lake, the legacy of a quarry mined to build a nearby highway, occupies the park. A canal dating to the 19th century slices the site off from the main museum building on a bluff to the east. The new park lies in a 100-year floodplain, though the park's landscape architect, Ed Blake, wonders if the impact of global warming doesn't make such considerations for a site as utterly dynamic as this one a little bit useless. Blake's approach is not to keep water out, but to understand how it will travel.

"Because of flooding, you always have plants and soil coming into the site," says Blake, the principal of Hattiesburg, Mississippi–based Landscape Studio. "It's always in a perpetual state of disturbance." The trick for Miss and Blake, as well as the architect for two buildings on the site, Marlon Blackwell, AIA, is to implement designs that flexibly correspond to a man-made site colonized by the forces of nature, be they water or plant.

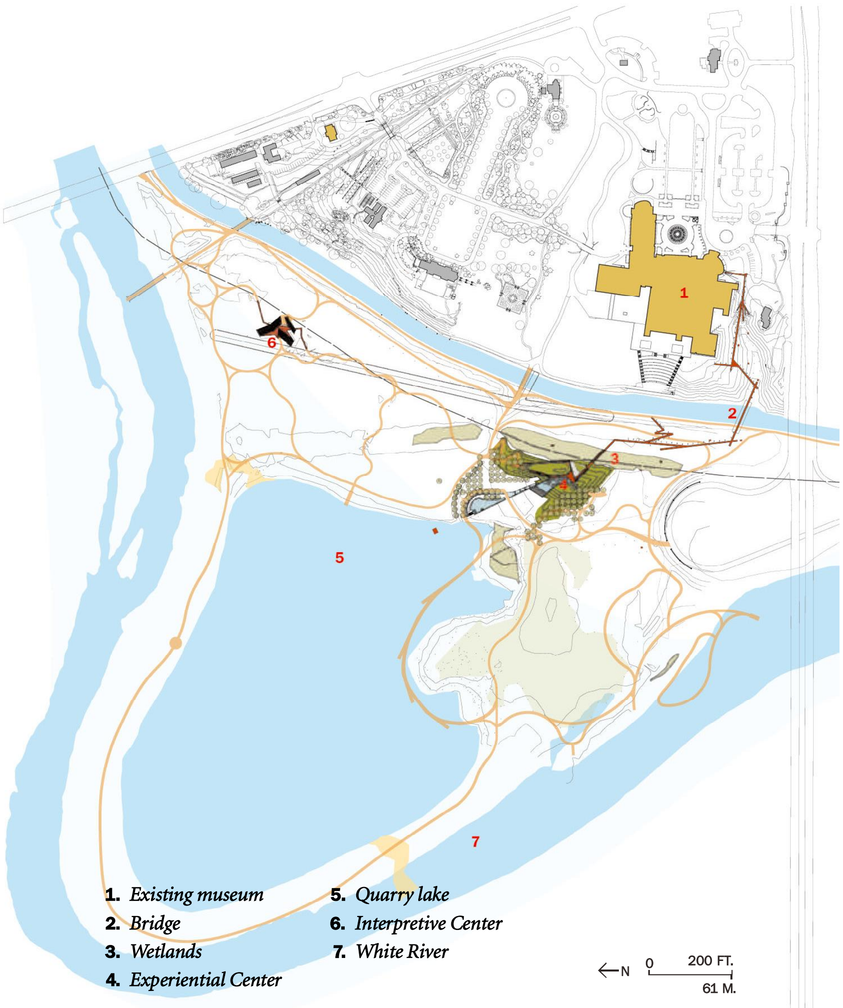
Of an artificial nature

Each designer has incorporated the site's inescapable presence of water into the proposed designs. Water sourced at the museum flows in a channel underneath Miss's path and bridge down to Blackwell's first structure, called the Experiential Center, which acts as a transitional boundary between architecture and the natural world with a rooftop pool around which visitors descend into a pavilion defined by a forest of columns. A rectangular aperturelike space 60 feet wide by 10 feet high meant for viewing the site's expanse defines one wall of this space. The entire structure sits on what Blackwell calls the "mount," a pile of vegetated debris left from previous construction; the mount will be more soundly reconstructed as the park develops.

Project: *Indianapolis Museum of Art, Virginia B. Fairbanks Art & Nature Park (proposed)*
Location: *Indianapolis*
Architect: *Marlon Blackwell, with Mary Miss*
Landscape architects: *The Landscape Studio—Ed Blake; NINebark—Eric Fulford, Ann Reed*

The park lies west of the museum in a 100-year flood plain. The site's program includes a bridge, various walkways, a viewing pavilion, classroom and gallery buildings, wetlands, and vegetation restoration. Ongoing, evolving, site-specific art commissions will eventually populate the site.

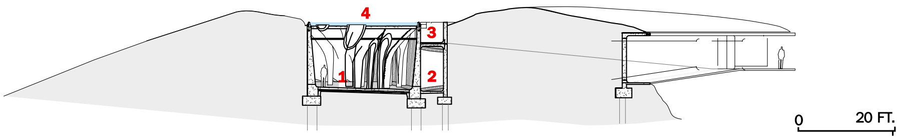
Mary Miss's proposed elevated walkway (above), constructed of perforated metal, will take visitors through the site's forests. A "runnel," or open channel, of water runs underneath the walkway, helping to connect visitors to the presence of water on the 100-acre park grounds.



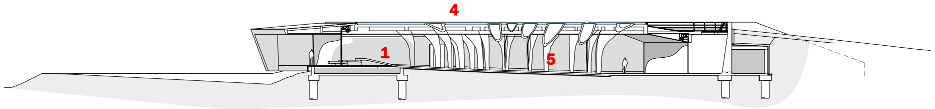
A path leading north from the Experiential Center follows rain gardens planned by Blake, skirting along a constructed wetland that will recycle all water used by that building and the next, which Blackwell calls the Interpretive Center. This gallery and classroom building, raised off the ground on pilotis, incorporates porous roofing and floor-decking systems to preserve groundwater recharge. "In some ways, the building is like a giant leaf," Blackwell says. In some circles, this would be considered biomimicry, or the adaptation of natural structure and performance to the built world. Miss, Blake, and Blackwell each practice a form of this, but shy away from using trendy terminology, including such seemingly innocuous words as sustainability. "I think of landscape as a building," Blake says. "I may put more water in or make it drier, or put pavement in to raise the temperature—all of those manipulations of nature-made materials are really human-made habitat."

A growing body of literature supports the design approach epitomized by the Indianapolis project. *Land and Natural Development (LAND) Code: Guidelines for Sustainable Land Development* (John Wiley & Sons, 2007), written by landscape architect Diana Balmori and Gaboury Benoit [RECORD, June 2007, page 186], explores site design strategies based on the latest scientific studies and technical resources available, rating various options to help designers understand what would contribute most to a project. For example, the book argues for a site imperviousness of less than 10 percent—plainly documenting the damage of higher imperviousness on watersheds. It then recommends solutions like rain gardens or green roofs.

Randolph T. Hester's thorough *Design for Ecological Democracy* (The MIT Press, 2006) artfully pleads for more of a total approach to city design based on a philosophy of community involvement and recognition of the interconnectedness of nature and urban infrastructure. Hester, a professor of landscape architecture at the University of California at Berkeley, is chiefly concerned with placemaking, long a design imperative of the landscape architect, but only rarely invoked in terms of sustainable design. As many architects will agree, sustainable design's value depends in large part on how much a client appreciates it. Hester's book calls to mind Ian L. McHarg's 1967 *Design With Nature* (Wiley, reissued 1992), which focuses primarily on placing cities within the larger contexts of regional watersheds and geological development. Clearly, the newer books are written to be used almost as tools, more pragmatic than McHarg's philosophical meditation on the big picture. Regardless, the literature all seeks to address what is perceived as the biggest challenge to the reclamation of site: rapid urbanization.



EXPERIENTIAL CENTER EAST-WEST SECTION



EXPERIENTIAL CENTER NORTH-SOUTH SECTION

1. *Viewing hall*
2. *Hollow columns*
3. *Corridor*
4. *Rooftop pool*
5. *Exterior corridor*

The Experiential Center (sections, left) is embedded in an existing mound. Mary Miss's bridge (below), shown in an early planned version, will allow visitors unencumbered views of the park's site.

RENDERINGS: COURTESY MARY MISS (THIS PAGE AND OPPOSITE)

Sidwell Friends, a first for constructed wetlands
Philadelphia-based firm KieranTimberlake Associates is no stranger to site innovation, having developed the prefabricated Loblolly House for a sensitive coastal wetland site in Delaware [RECORD, November 2006, page 185]. For the firm's recent expansion of the Sidwell Friends School in Washington, D.C., the architects incorporated a constructed wetland into a courtyard of the building in order to process its wastewater for reuse in flushing toilets, among other uses for nonpotable water. The district's health department hasn't approved the wetland's gray water for irrigation purposes, so a separate system collects storm-water runoff for irrigation.

The wetland, the first of its kind for D.C., occupies a series of terraces in the courtyard—premium space the architects argued should be used as much for teaching purposes as for lessening the building's water use. Opened in fall 2006, the expansion uses 90 percent less water than comparable buildings, which helped it earn a LEED Platinum rating from the U.S. Green Building Council. "Primarily, it had to pump sewage," says Stephen Kieran, FAIA, the project's architect. "But it also had to be beautiful, since it's right at the entrance to the building. It became an environmental aesthetic."

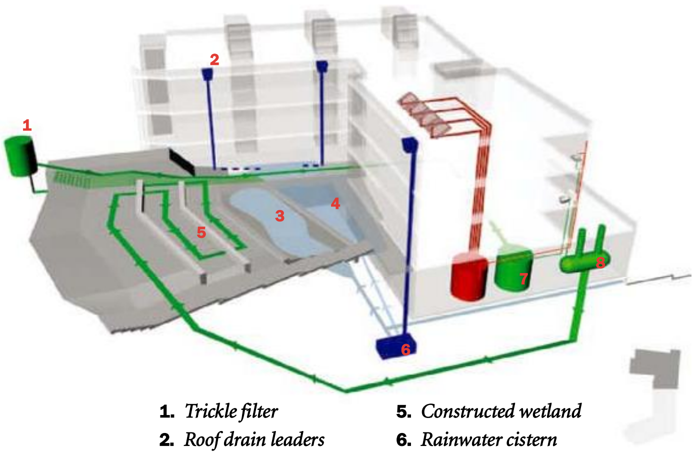
Unlike Indianapolis, the Sidwell project is located in a dense urban site, where architects must reconcile land use with significant economic pressure and a city government less inclined to approve unconventional technology for use at a school. The urban location further obscures the effects of the project's storm-water runoff, especially sensitive since Sidwell's location in Northwest Washington places the campus in the watershed of Rock Creek Park to the east.

Sidwell's wetland was instigated by the project's environmental consultant, Bill Reed, but was designed with the guidance of Michael Ogden, a wetland expert and civil engineer with Natural Systems in Santa Fe, New Mexico. Ogden says Sidwell represents the first total reuse system—in that only negligible amounts of water leave the site via utility drainage systems—installed in an urban site in the country. "We don't normally think of wastewater-treatment systems as architectural elements," Ogden says, cognizant of the fact that generations of students passing through the school will now have first-hand experience with a process otherwise invisible in the urban landscape.

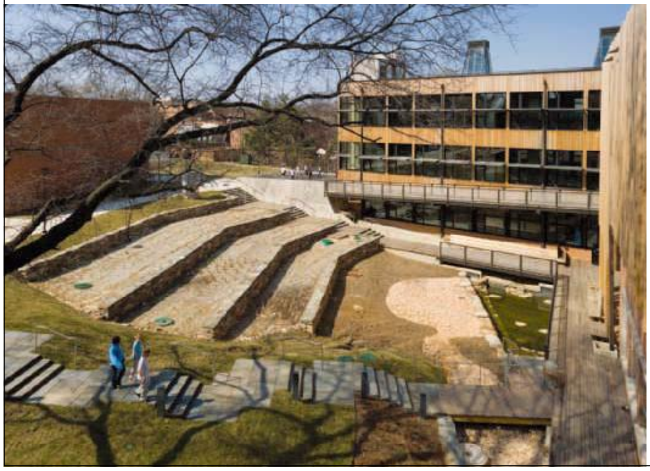
The six-and-a-half-day process, which treats nearly 8,000 gallons of water per day, begins with a primary treatment tank, where sewage from the 72,500-square-foot expansion/renovation project encounters anaerobic bacteria such as that found on the bottom of a pond. It is then pumped to a trickle filter, where it falls over rocks before moving on to

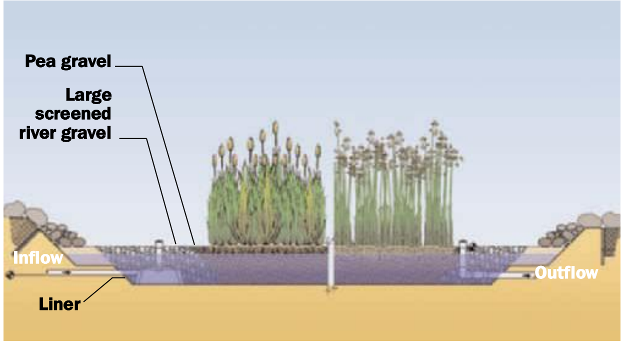
Project: *Sidwell Friends School (built)*
Location: *Washington, D.C.*
Architect: *KieranTimberlake Associates*
Landscape architect: *Andropogon Associates*

KieranTimberlake Associates added 39,000 square feet of new classroom space for a junior high campus. The courtyard includes a constructed wetland sewage-treatment system (right) that filters all of the water from the building for flushing toilets. A separate stormwater-collection system provides water for irrigation.



1. *Trickle filter*
2. *Roof drain leaders*
3. *Bioretention pond*
4. *Biology pool*
5. *Constructed wetland*
6. *Rainwater cistern*
7. *Gray-water storage*
8. *Primary treatment tank*





The plants in the terraces of Sidwell's subsurface-flow constructed wetland (left) are expected to grow in over the summer. Subsurface wetlands (above) control odors and environmental hazards by keeping water underground.

the tiered wetland. Thus far, a typical gallon of water has been in the system roughly three days; the wetland itself requires another two days.

Sidwell's wetland consists of microorganisms and microinvertebrate populations attached to the root hairs of plants, mostly stalked bulrush, a form of papyrus. Ogden says the thousands of bacteria types found on the roots of such plants ensure that most compounds in the sewage can be treated, noting that wetlands are better at removing prescription medicines from water than most utility wastewater-treatment plants. Sidwell's wetland is of the subsurface-flow variety, where water lies beneath layers of pea gravel. Subsurface-flow wetlands, as opposed to the surface-flow type, are used when it would be likely for people to regularly come into contact with the water and when odors could pose problems. (A Living Machine, a proprietary tank-based constructed wetland, typically needs to be confined to a restricted room because of odors and health concerns.)

Finally, the water passes through a sand filter, where anything the wetland missed is removed prior to collecting the water in a storage tank where it can be used for flushing toilets. Color-coded purple pipe, required by the Uniform Plumbing Code, indicates gray-water systems in the building, which prevents plumbers working in the building in years to come from cross-connecting with potable systems. Further, Ogden says his company injects biodegradable blue dye into the water to prevent confusion.

While a school may not pose significant challenges to a wetland, since even conventional cleaning products are generally easily filtered, Ogden has used wetlands in tough cases like landfills, refineries, food-processing facilities, and slaughterhouses, all in a variety of extreme climates. "They are much better than industrial technology, since machines break," Ogden says. "We need to rely on self-organizing, self-regulating systems that connect to the natural environment."

Government Canyon, gateway to an endangered aquifer

Establishing a connection to the natural environment impressed itself immediately on Lake/Flato Architects when the San Antonio–based firm undertook design on the Government Canyon Visitor Center in Helotes, Texas. The project, completed in October 2005 as a gateway to an 8,000-acre groundwater recharge conservation district, straddles the threshold of a watershed feeding the Edwards Aquifer—San Antonio's main source of water. The center's south side faces a parking lot, while the north side overlooks the periphery of the environmentally sensitive recharge zone.

Lake/Flato designed three structures—classroom, gallery, and combination administrative/gift shop buildings—all oriented around a

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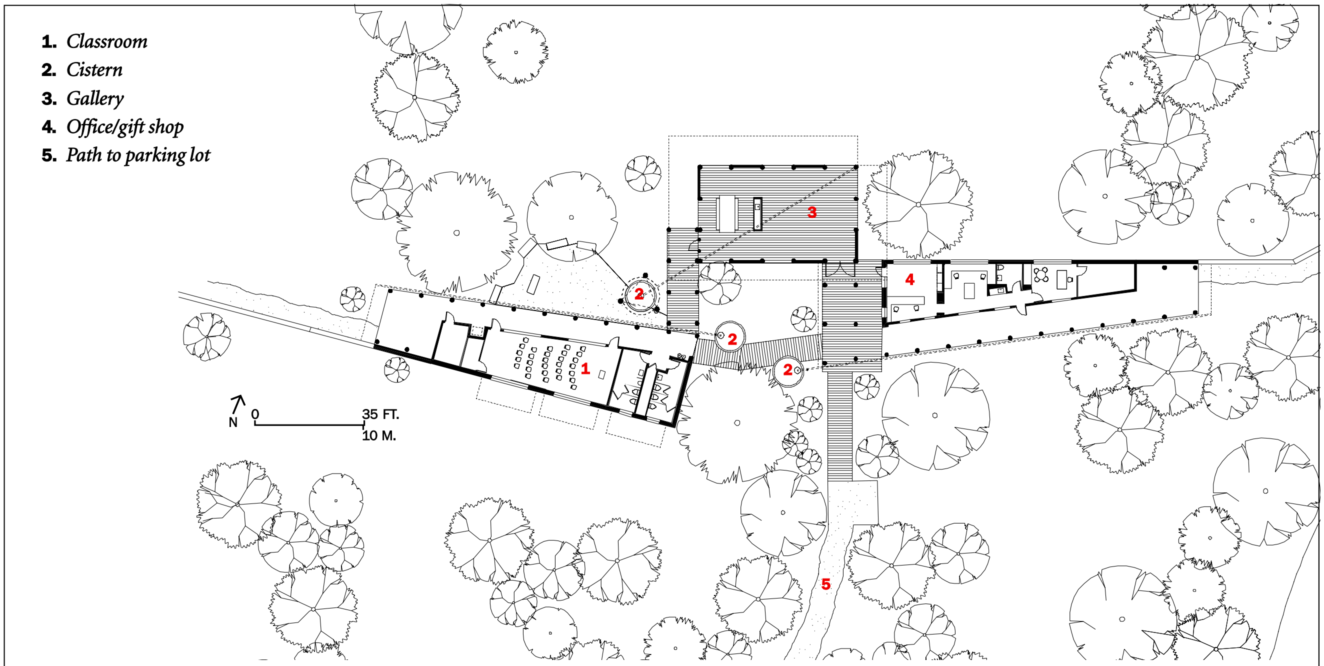
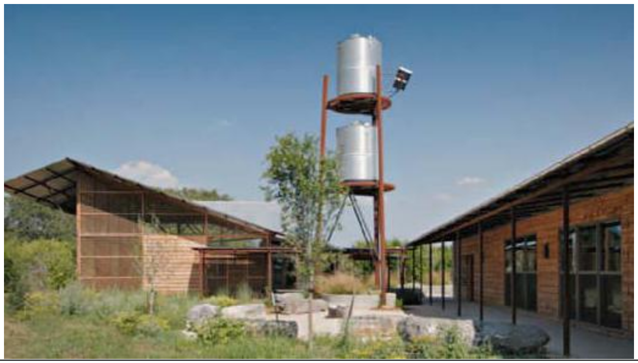


1. *Classroom*
2. *Cistern*
3. *Gallery*
4. *Office/gift shop*
5. *Path to parking lot*

Project: *Government Canyon Visitor Center (built)*
Location: *Helotes, Texas*
Architect: *Lake/Flato Architects*

Government Canyon, which acts as a gateway to an environmentally sensitive groundwater-recharge preserve open to hikers and bicyclists, relies on a gravity flow stormwater system to minimize the need for energy-consuming pumps. Solar-powered pumps provide what little energy is required to get water into the tower's cistern (right), which provides pressurized water for flushing toilets and irrigating the nearby landscape.



PHOTOGRAPHY: © CHRIS COOPER

courtyard storm-water-collection system. The sloped, corrugated-metal roofs of each building siphon rainwater into gutters and onto rain chains descending into two underground concrete cisterns (roughly 8,600 gallons each), mimicking the naturally sloped land and percolation process of the aquifer's catchment basin. A solar-powered system pumps water to a third cistern, perched atop a tower, which creates pressure for flushing toilets and what little irrigation the center's plants need. State officials rejected the use of a constructed wetland for treating sewage, arguing it could threaten public health (a common argument in many jurisdictions), so it flows into a conventional septic tank system.

"We wanted to demarcate the edge of the recharge zone with our buildings," says Robert Harris, AIA, project architect on the Lake/Flato team. "The long wings stretching out across the landscape with dry-stacked stone walls indicate where the aquifer's preservation begins." Harris says design began with establishing the average expected annual rainfall amounts (32 inches) and then calculating how much water the roof area would collect. Once designers subtracted the amount of water needed to flush toilets, the remaining water volume determined the area of irrigated landscape the project could support. A backup valve connection to the utility water source ensures toilets will always flush. Harris notes that some rural districts view stormwater collection as robbing a watershed, but in Texas, where rapid runoff and flooding pose serious soil-erosion problems, slowing the water down helps immensely.

While visitors can't miss the stormwater-reuse system, the subtlety of the architectural moves undertaken by Lake/Flato—like the site itself—require more careful observation. For example, the architects raised the central gallery building 18 inches above grade, supporting the wood-deck floor with rusted steel pipes high enough off the ground to allow the natural flow of water underneath. A topographical survey, commissioned by the Texas Department of Parks and Wildlife, helped the architects determine how to orient the project with minimal disturbance to the watershed. "In urban watersheds, that work has been done for you, but in rural ones, you often don't discover what's happening until it's changed," Harris says. "Regional planning for watersheds is just not an institutionalized part of our development process."

From impervious to pervious at Philadelphia's Navy Yard

The idea of the pristine site in America is most likely a thing of the past. Even Government Canyon, as lush and bucolic as it appears, experiences the aftereffects of nearby suburban sprawl development. While Sidwell

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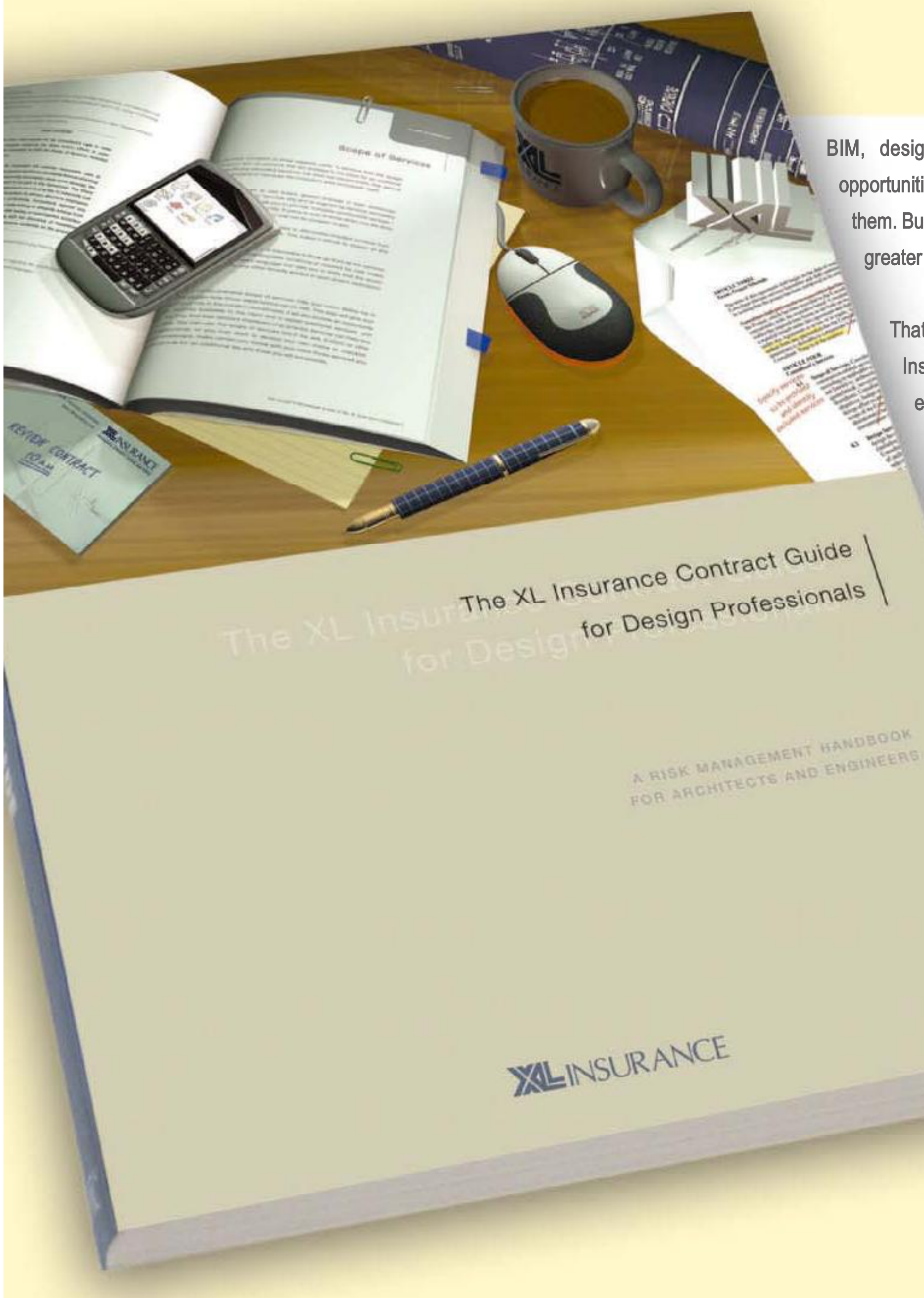
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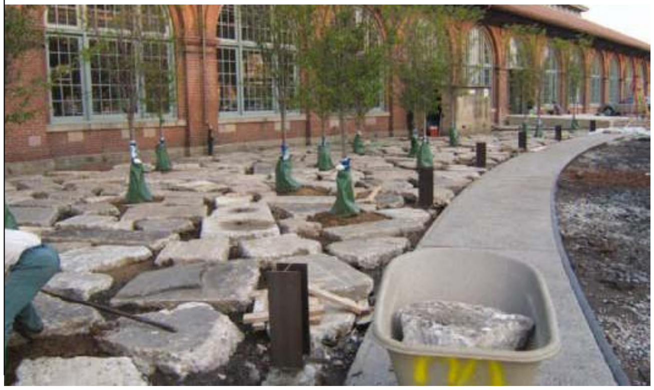

D.I.R.T. Studio's design for a new courtyard in the existing Navy Yard in Philadelphia required contractors to break up an existing concrete slab (right) and reuse the rubble as pervious paving around newly planted trees (below).

exposes the constructed nature of landscape most apparently, the Indianapolis park development cannot escape its industrial legacy, where the site's topography represents layers of decisions made for various economic reasons decades ago. These embedded narrative threads—landscape histories made evident through the ingredients of nature—form the working methodology of Charlottesville, Virginia–based D.I.R.T. Studio. The studio's two landscape architects, Julie Bargmann and Christopher Fannin, approach each site design as an investigation of existing conditions, with the goal of reconfiguring those into an emergent, new condition. "These postindustrial places have these echoes and we have to find in them the transformative agent that makes them relevant today," Fannin says. "We also work with the premise that nothing leaves the site."

D.I.R.T.'s design for the Navy Yard in Philadelphia, which included a courtyard for the Urban Outfitter's retail group, incorporated artfully demolished concrete chunks from an existing impervious parking lot that were reinstalled in a layer of porous gravel around newly planted trees—water can now flow freely into the ground. Bargmann notes of the project, completed in early 2006, "This is not high technology, just a new way of building." As American developers return to the city as the new territory of expansion, such innovative ways of designing for and building on a site—of understanding the baseline of what constitutes the inhabited natural world in a technological age—will certainly figure greatly in the success or failure of any venture. The real question is whether architects will help people see this, or construct another barrier. ■

AIA/ARCHITECTURAL RECORD CONTINUING EDUCATION

INSTRUCTIONS

- **Read the article "Toward a Cybernetic Site" using the learning objectives provided.**
- **Complete the questions below, then fill in your answers on the next page.**
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QUESTIONS

1. Which is not the design idea for the bridge across the canal at the Indianapolis Museum of Art?
a. to confront the viewer with nature
b. to get people to notice what they take for granted in a landscape
c. to keep people separated from the water
d. for the bridge to be an innovative viewing device

2. Since the Indianapolis park lies in a 100-year floodplain, the architect's approach was to do which?
a. keep water out
b. keep water in
c. construct a path for water flow
d. understand how water will travel

3. The architect refers to the Interpretive Center as a "leaf" for which of the following reasons?
a. the structural steel resembles a tree
b. the porosity of the roof and deck material allows water to flow through
c. the building's canopies collect leaves for composting
d. the color of the building changes with the seasons

4. What will be done with most of the water used by the Experiential Center and the Interpretive Center?
a. it will be channeled into the canal
b. it will be recycled through a constructed wetland
c. it will be drained into a cistern
d. it will be drained into a septic tank

5. The Sidwell Friends School reuses the building's wastewater for which purpose?
a. to water the grounds
b. to supply a decorative fountain
c. to flush toilets
d. for fire standpipes

6. Before the Sidwell wastewater enters the wetland, it goes through all except which?
a. a trickle filter of rocks
b. plant root systems
c. a primary treatment tank
d. a tank consisting of anaerobic bacteria

7. What color pipe is required by the Uniform Plumbing Code for gray water?
a. gray
b. yellow
c. blue
d. purple

8. The wastewater from Government Canyon flows into which?
a. sewers
b. wetlands
c. septic tank
d. river

9. The architects raised Government Canyon on pilotis to allow the stormwater on-site to do what?
a. flow naturally through the site
b. pass into moats around the perimeter
c. percolate into the landscape
d. flow into storm sewers

10. The author of this article contends which about sites and watersheds?
a. a pristine site most likely will not be found
b. most sites experience the effects of other development in the region
c. a site's topography may represent decisions made decades ago
d. all of the above

PHOTOGRAPHY: COURTESY D.I.R.T. STUDIO

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Program title: "Toward a Cybernetic Site," Architectural Record (07/07, page 149). 077EDIT1

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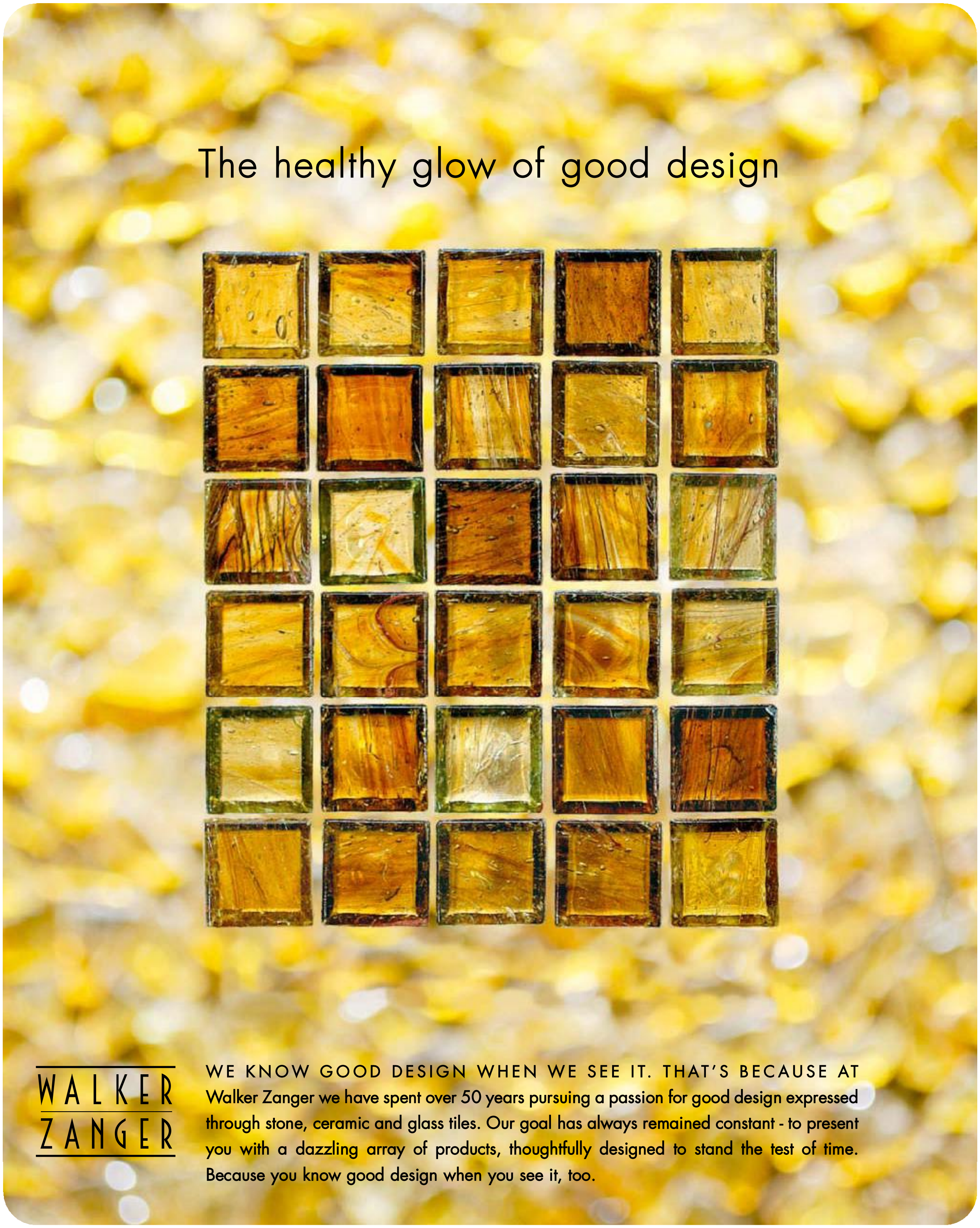

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Tech Briefs

To create Seattle's Olympic Sculpture Park, the design team **shaped the land,** reinforced a fragile seawall, **and restored the shoreline's ecosystem**

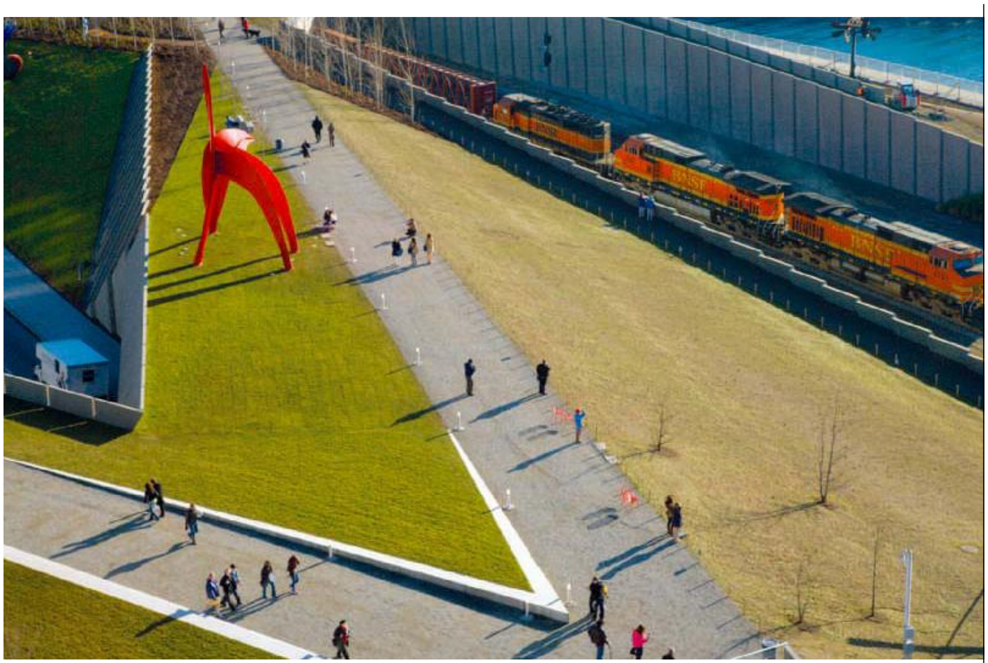
Former brownfield site reinvented as a connection between the city and the water's edge

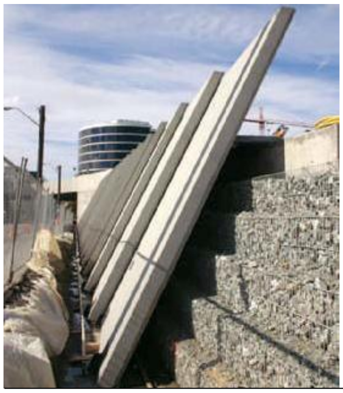
To create Seattle's new Olympic Sculpture Park, lead designers Weiss/Manfredi have fittingly sculpted the earth. At the northwest corner of downtown, overlooking Elliott Bay, on land previously used as a fuel storage and transfer facility, the New York City–based firm developed a Z-shaped path that crosses a busy street and active railroad tracks and negotiates a 40-foot grade change. The serpentine route takes visitors past carefully placed works from the Seattle Art Museum collection, including pieces by Alexander Calder, Richard Serra, and Louise Nevelson, and provides stunning views of the city and the surrounding landscape (see story, page 110).

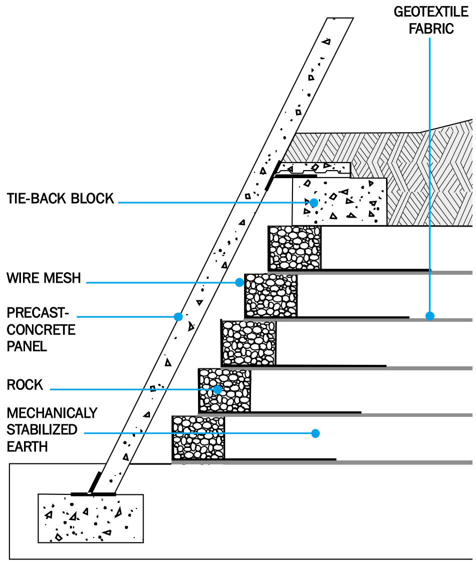
Not surprisingly, an extensive system of retaining walls was needed to make this new topography and hold back the 8.5-acre site's 200,000 cubic yards of fill. The only visible part of the system is its overlapping and sloping concrete panels, each 12 feet wide and as tall as 30 feet. The repetitive nature of these precast elements creates "a module and a measure, allowing the site to feel bigger," and provides an appropriate backdrop to the sculpture, says Marion Weiss, AIA.

The real "work" of retaining the earth is actually occurring behind the precast panels. There, mechanically stabilized earth (MSE) holds back tons of fill. "Decoupling" the earth-retaining function from the architecture was a more cost-effective solution than a traditional poured-in-place concrete retaining wall backfilled from behind, says Drew Gangnes, director of civil engineering for Magnusson Klemencic Associates (MKA). The firm was both civil and structural consultant for the project.

The MSE stretches horizontally under the park surface for a distance equal to about 80 percent of the height of the wall, and is made up of



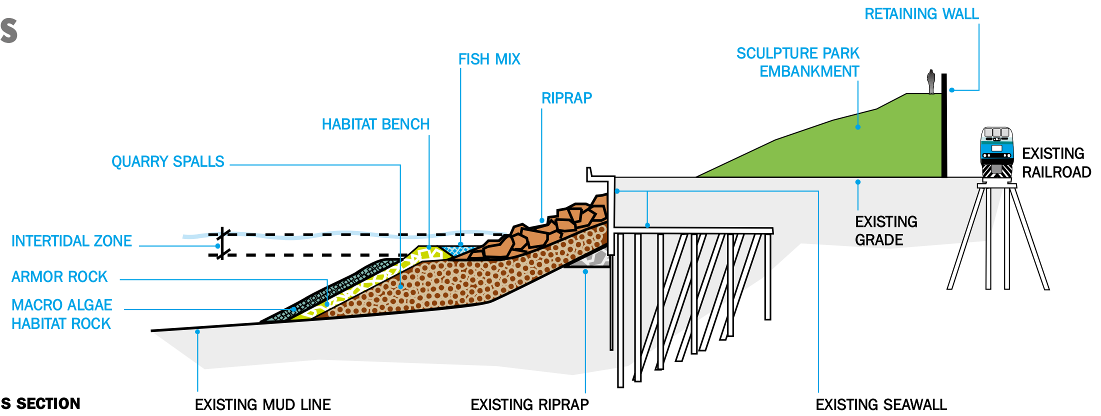




RETAINING WALL SECTION

To bridge a busy street and an active rail line, designers created a Z-shaped path and sculpted the earth (top). To hold back 200,000 cubic yards of fill, engineers devised a mechanically stabilized earth retaining-wall system hidden behind overlapping and sloping precast panels.

PHOTOGRAPHY: © LARA SWIMMER (TOP AND MIDDLE); © MICHAEL DICKTER (BOTTOM)



SEAWALL BUTTRESS SECTION

A buttress system stabilizes the aging timber-and-steel seawall along the shoreline. It was designed to also provide refuge for migrating salmon (section, top). Just beyond the end of the seawall, the designers have created a beach (above). The MSE retaining-wall system used to form the park's contours is composed of layers of soil separated by geotextile fabric. Near the face of the MSE, the soil transitions to rock held in place by wire mesh (right).

PHOTOGRAPHY: © BENJAMIN BENSCHNEIDER (LEFT); © BRUCE MOORE (RIGHT)

18-inch-deep layers of soil separated by geotextile fabric. Near the face of the MSE, the fabric transitions to wire mesh, L-shaped in section, and containing rock rather than soil.

The panels are attached to the MSE system with slotted connections to a continuous tie-back block just below grade level and to the footing. To prevent transfer of loads from one panel to another due to settlement or seismic activity, adjacent panels are not connected, explains Jay Taylor, MKA principal. A gap of a few inches between the panels and the MSE face was sized so that the two components do not slam into each other during a temblor, and to prevent the panels from toppling.

The project also included reinforcement of the sculpture park's deteriorating 800-foot-long timber-and-steel seawall. City and state agencies had been studying the wall's reconstruction as part of a larger proposal to rebuild about 8,000 feet of seawall protecting the downtown waterfront. Preliminary design documents showed the agencies planned a costly behind-the-wall intervention that would avoid disrupting the piers that line much of the Elliott Bay shore.

Since there were no piers along the park's section of waterfront, and because its seawall was not adjacent to a seismically and politically sensitive elevated highway, designers had some freedom to explore alternatives. Their solution was to reinforce the existing seawall with an in-the-water buttress. But in order to obtain permitting, the team had to develop a system that would create a hospitable environment for migrating salmon in addition to providing the necessary reinforcement.

The team satisfied both the habitat and structural requirements using layers of riprap and smaller diameter rock carefully sized to create an uninviting environment for salmon's predators. Incorporated into the buttress, at the level of the intertidal zone, is a so-called "habitat bench." A hollow in this bench is filled with aggregate and other material that supports the growth of organisms that salmon like to eat.

Gangnes estimates that this $5 million buttress, which he jokingly refers to as a "pile of rocks," cost about a tenth of what the proposed city/state solution would have.

Just beyond the end of the seawall, at the northern end of the park, the team designed a crescent-shaped beach protected by two peninsulas. Environmental consultants used computer simulation to model the motion of the waves and wind to make certain that the sand would not be carried away. This beach is the culmination of a journey from the city to the water's edge, from the most urbane part of the park to that most connected to nature. "It brings in both extremes," says Weiss. *Joann Gonchar, AIA*

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Market Trends Drive the Need for Effective Sound Solutions

Acoustically enhanced gypsum board and other options offer efficient ways to build better partitions

Provided by National Gypsum Company

Noise is an increasing concern in structures of all types. Skyrocketing land costs have spurred high-density multifamily housing and office construction in a growing number of markets in the United States. Nationwide, retirement-age baby boomers are downsizing from single-family homes to condominiums and townhouses. In high-rise housing, individual living units are closer together than in traditional single-family dwellings—putting tenants in position to hear sound from neighboring units. Noise is also a potential problem in single-family dwellings where home theater systems are becoming more prevalent in use and sophisticated in technology, resulting in the possibility of more noise being transmitted between spaces. Schools, hospitals, retirement homes, hotels and resorts are also seeking methods of keeping rooms quieter, and are increasingly looking for ways to control sound among areas within their facilities.

Such changing market dynamics have meant an increased need for wall partitions that can reduce the transmission of airborne sound between spaces within buildings. In addition, in many places specific levels of acoustical performance are mandated by building code.

While some acoustical solutions have existed for decades, manufacturers have also responded to the growing need for sound control with new products that achieve the same or better results with easier and more reliable installation, as well as lower material and labor costs and less floor space.

Among the challenges to architects and owners is to be aware of all the available solutions and to understand which are consistent with the goals of a particular project. This article will discuss the ways in which acoustical control can influence building design. The comparative advantages of traditional and new sound-damping solutions will be highlighted, as will best practices in increasing STC performance of wall partitions.

Markets for Increased Sound Control

Construction of apartments, townhomes and condominiums is on the rise. To illustrate this point, consider the housing situation in San Diego, California, the nation's eighth largest city and one of the most expensive housing markets in the United States. In 2006, building permits in San Diego for multifamily housing units exceeded those for single-family residences for the first time since 1990.

Multifamily housing, with hundreds of families living in close proximity, brings on the potential for noise-related complaints. In a national survey of 1,500 adults conducted by Alan Newman Research, noisy neighbors were the single most frequently cited annoyance of those living in multifamily dwellings. More than 60 percent cited hearing neighbors through the walls as the top noise compliant, with more than half identifying loud music as the chief source of that noise.

Courtesy of National Gypsum Company

Acoustically enhanced gypsum board allows for construction of higher STC area separation walls.

Industry studies show that residents of detached single-family homes are seeking privacy in terms of limiting room-to-room sound transmission, with the master bedroom and laundry room of significant concern. In the educational arena, it is a widely accepted fact that quieter classrooms enhance the learning environment for students of all ages. The federal healthcare privacy law known as the Health Insurance and Portability Act has

CONTINUING EDUCATION

Use the learning objectives below to focus your study as you read **Market Trends Drive the Need for Effective Sound Solutions.** To earn one AIA/CES Learning Unit, including one hour of health safety welfare credit, answer the questions on page 167, then follow the reporting instructions or go to construction.com/CE/ and follow the reporting instructions.

LEARNING OBJECTIVES

After reading this article, you should be able to:

- Discuss trends driving the need for wall partitions that can reduce sound transmission
- Explain key acoustical terms and concepts
- Specify the appropriate sound control system for your projects

mandated that health care institutions ensure that patient information remains strictly private. Both the legal mandate and the perceived needs of their patients are driving health care facilities from hospitals to clinics to doctors' offices to seek effective sound-reduction solutions. In the competitive hospitality industry, hotels seek out new ways to attract guests, and enhanced privacy through sound-deadening partition walls is another popular trend.

> ***In a national survey...noisy neighbors were the single most frequently cited annoyance of those living in multifamily dwellings.***

Key Acoustical Terms and Concepts

Understanding key acoustical concepts is critical in order to gain an understanding of the way in which sound is transmitted through walls, as well as human sensitivity to changes in noise levels.

Airborne Sound. Airborne sound consists of energy generated by a source, transmitted through a medium, and detected by a receiver. All three of these conditions must be in place or airborne sound cannot exist. The level of airborne sound is determined by the frequency of vibrations. This measure of frequency is given in hertz (Hz). The unit hertz can be thought of as the number of sound waves that pass a fixed point within a given amount of time. For example, frequencies between 20 Hz and 20,000 Hz are detectable by children. As people age, their ability to hear high-frequency sounds is significantly diminished. Humans are most sensitive to sounds in the range of 100 Hz to 5,000 Hz. Speech and other traditional sounds within a building range from 125 Hz to 4,000 Hz, which is the frequency range considered when calculating STC.

Decibels. The units decibels (dB) are used in acoustics to calculate the intensity or loudness of sound and to provide a relative measurement of sound level. Higher dB levels relate to loud sounds while lower dB levels relate to quiet sounds. A change of 3 dB would be barely noticeable to most human's ears, while a change of 5 dB would generally be noticeable to the average person. An increase of 10 dB would sound twice as loud, and a decrease of 10 dB would sound half as loud. It's important to note that the decibel scale is not linear. For example, compare the sound of a conversation (55 dB) with that of a lawnmower (105 dB). The lawnmower is not twice as loud as the conversation, but several orders of magnitude louder—a critical factor to observe when considering construction materials to prevent external noise from being heard inside a building.

RATING	ACTIVITY	SOUND LEVEL (dB)
Painful	Jet Engine	120+
Very Loud	Industrial Machinery	100
Loud	Stock Trader Floor	80
Moderate	Normal Speech	65
Quiet	Suburban Home	45
Very Quiet	Barely Audible	25

HUMAN SENSITIVITY TO CHANGES IN SOUND INTENSITY LEVELS	
1 dB	Generally not perceptible
3 dB	Just perceptible
5 dB	Clearly noticeable
10 dB	Twice or half as loud
20 dB	Four times as loud or 1/4 as loud

Measuring Noise Reduction

Both government and industry standards were established to achieve acceptable noise levels in residential and commercial construction. U.S. standards are based primarily on a system that measures how well walls, floors, and doors prevent noise intrusion from adjacent rooms. That system is known as Sound Transmission Class, or STC. STC is a single-number rating of the effectiveness of a material or construction assembly to retard the transmission of airborne sound. It provides an indication of the volume at which transmitted sound is perceived by the listener. The higher the STC value, the more effective the assembly or material in reducing sound transmission.

For interior walls, STC values are derived by conducting a test according to a procedure outlined in ASTM E 90, "Standard Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions." ASTM E 90 is designed to measure how well building materials or specific wall assemblies reduce the transmission of airborne sound at 16 frequencies between 125 Hz and 4,000 Hz, which is consistent with the frequency range of speech and constitutes a wide range of airborne sounds at different pitches.

The ASTM E 90 test procedure is essentially conducted in the following way: In a controlled laboratory environment, a specified wall partition is built between two rooms—the source room, where airborne sound is emitted, and the receiving room, where the sound is received and measured in decibels. As airborne sound moves from source to receiving room, it naturally tends to decrease in decibels. The greater the level of decrease, the higher the STC rating.

ASTM E 413 calculates ratings for both laboratory and field measurements of sound attenuation. The test data collected would be analyzed using ASTM E 413, "Classification for Rating Sound Insulation." The result is a single-number acoustical rating. The higher the STC rating, the greater a partition's ability to reduce transmission of airborne sound from one side of a partition to another. Higher STC ratings will reduce typical noise from an adjoining room, including normal or loud conversation, a baby crying, dogs barking or sounds made by kitchen appliances.

Acceptable STC Ratings for Wall Partitions. In determining an acceptable STC rating, the industry generally turns to a prominent study by the National Research Council of Canada, "Deriving Acceptable Values for Party Wall Sound Insulation," by J.S. Bradley. Looking at the attitudes of residents in 600 multifamily units with 300 party walls between them, the study found that residents with lower STC-rated walls were more likely to be awakened by noises; have trouble falling asleep due to noises; and think their neighbors were less considerate. They were also more likely to want to relocate. The study concluded that an STC rating of 55 was a realistic goal for acceptable sound insulation and that an STC rating of 60 would virtually eliminate negative effects of noises from neighboring units.

The results of the Canadian study are reflected in the federal noise-reduction standards used by the United States Department of Housing and Urban Development (HUD). HUD uses a three-tier system for rating construction quality in terms of sound attenuation. An STC-55 or above is the criterion for the highest rated Grade 1 dwelling. Ultra-high-end dwellings may incorporate wall partitions of up to STC-65. HUD's Grade 2 building indicates an STC-52 rating; Grade 3 signifies a rating below STC-52. In the national building code, the minimum allowable rating for multifamily construction is STC-50.

Music-related sounds may require some of the highest STC ratings, which is important to note as loud music is the chief noise-related complaint reported by residents of multifamily dwellings. In practical terms, an STC-55 rating will enable the resident of a multifamily dwelling to remain undisturbed by a neighbor playing a loud sound system. With an STC-55 rating, loud music will be reduced to the level of a normal conversation by the time it passes through the shared wall. It is important to note that the STC ratings relate only to airborne sound; they do not apply to "structure" sounds such as footsteps or structural vibrations from street noise or airplanes flying overhead.

Achieving Acceptable Noise Levels: Design Considerations in Acoustical Wall Partitions

There are three strategies to reduce noise in buildings: eliminating the source of the noise; using sound-absorbent rather than sound-reflective materials; installing sound barriers to prevent sound transmission into adjoining areas. Most of the solutions in current use fall into the third category. Several techniques can be used alone or in conjunction with others to achieve a higher STC rating. With the goal of decreasing the amount of sound transmission through the partition, the following five variables can have an impact on the ability of the partition to provide this desired loss.

WAYS TO AFFECT SOUND TRANSMISSION

Increasing Mass. Increasing the amount of material sound waves must penetrate to reach the adjoining room is an obvious tactic. More mass means sound waves must spend more energy to flow through the wall. Using multiple layers of gypsum board is one solution that can reduce sound transmission from room to room. Increasing mass in a cost- and space-effective way presents its own challenges, however. The sheer amount of mass needed to reduce decibel levels significantly may require a wall thickness that is impractical for a building.

Eliminating Stiffness. Flexibility in the wall assembly will promote sound absorption; conversely, too much stiffness will reduce transmission loss. For that reason, replacing wood studs with metal studs, which inherently have more give to them, is a preferred practice and results in better acoustical performance. In general, less framing will achieve superior acoustical results, with 24-inch o.c. framing spacing outperforming 16-inch o.c. framing.

Increasing Damping. Damping is a technique for dissipating vibrational energy in a structure, thereby decreasing the amount of energy allowed to pass through to the next room. Damping consists of one or a combination of materials applied to the wall interior to boost its ability to reduce mechanical energy. All materials demonstrate some damping, though many materials are actually effective radiators and transmitters of sound.

Increasing Cavity Depth. Increasing the depth of the wall cavity between wall panels in two adjoining units can increase the thickness of the overall partition, and thus increase the amount of sound transmission loss, particularly when the cavity is filled with acoustical insulation.

Providing Cavity Absorption. Another way to control airborne sound from room to room is through the use of materials that absorb sound by converting sound waves into heat. Adding sound-absorbing material such as fiberglass or mineral-fiber insulation to the cavity of a partition will increase the amount of sound transmission loss. The sound absorbing material should completely fill the cavity but not be compacted or compressed in any way. Any gaps in the wall cavity should be filled.

Sound Reduction Solutions

There are a range of products that will improve the acoustical performance of a wall partition through one or a combination of strategies outlined above.

Acoustically Enhanced Gypsum Board. Mass and damping are important features in a wall's ability to achieve a higher STC. These features are incorporated in acoustically enhanced gypsum board, a new product on the market to reduce sound transmission. This product incorporates increased mass by using gypsum board with a high-density core in an arrangement known as constrained layer damping.

While the introduction of structural damping will increase the amount of sound transmission loss, constrained layer damping, in particular, is more effective. Constrained layer damping can be a three-layer "sandwich" system constructed from attaching a base layer to a damping layer and adding a third constraining layer. In acoustically enhanced gypsum board, constrained-layer damping, a new form of noise reduction, is achieved through the use of a middle layer containing viscoelastic polymer sandwiched between two pieces of enhanced high-density gypsum board. A form of plastic, the viscoelastic polymer absorbs and dissipates noise by converting the vibrational energy of sound waves into negligible heat. Acoustically enhanced gypsum board is appropriate for use as single-layer application or as a component of multi-layered wall assemblies where sound transmission between rooms or dwelling units is a concern. The gypsum board can be mold-resistant, if need be.

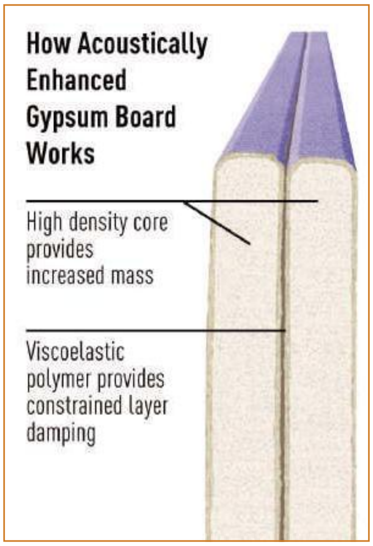
> ***... a new form of noise reduction is achieved through the use of a middle layer containing viscoelastic polymer sandwiched between two pieces of enhanced high-density gypsum board.***

A key advantage of this type of product is that the entire wallboard panel can be produced in a typical 5/8-inch gypsum board for use in the construction of high-STC-rated wall assemblies. Because the solution relies on constrained-layer damping rather than structural isolation, no additional depth is required in the wall cavity, as is the case with many typical sound-reduction solutions. As a result, architects and building owners can benefit from the ability to maximize floor space in each unit.

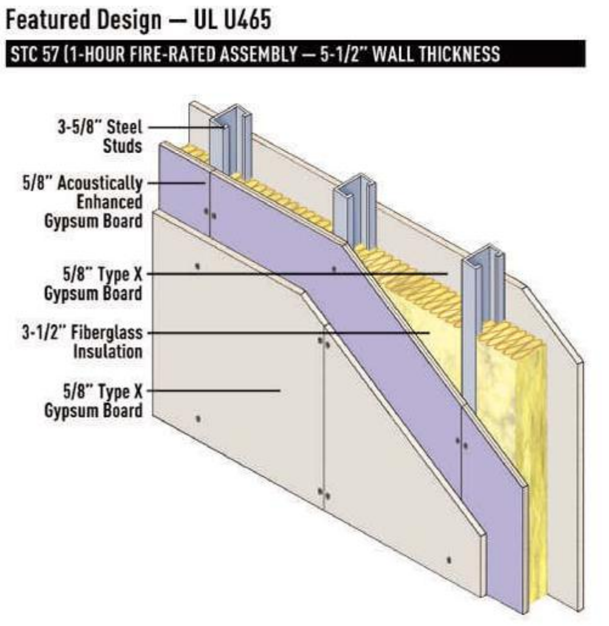
Because acoustically enhanced gypsum board can be installed like traditional gypsum board, it is able to offer a more reliable and less complicated solution than alternative methods that require clips and channels, and where the possibility of improper installation is a key concern. Another advantage of acoustically enhanced gypsum board is that it is easily finished and can be decorated in the same manner as standard gypsum board.

Fire Resistance Ratings

While most acoustically enhanced gypsum board cannot be used as a substitute for 5/8-inch board in a fire-rated assembly, it can be used as an additional layer in all UL fire-rated assemblies without compromising the fire rating. Upgrading such an assembly with an acoustically enhanced product can increase the STC rating by as much as 10 points while maintaining its fire rating. As an option, the acoustically enhanced product may be used as an additional layer on one or both sides of fire-rated wall assemblies. When acoustically enhanced gypsum board is installed between the


How Acoustically Enhanced Gypsum Board Works
High density core provides increased mass
Viscoelastic polymer provides constrained layer damping

FIRE-RATED ACOUSTICALLY ENHANCED GYPSUM BOARD STC 57



Featured Design — UL U465

STC 57 (1-HOUR FIRE-RATED ASSEMBLY — 5-1/2" WALL THICKNESS

3-5/8" Steel Studs
5/8" Acoustically Enhanced Gypsum Board
5/8" Type X Gypsum Board
3-1/2" Fiberglass Insulation
5/8" Type X Gypsum Board

Though it cannot be used as a substitute for 5/8-inch Type X board in a fire-rated assembly, acoustically enhanced gypsum board may be used as an additional layer on one or both sides of fire-rated wall assemblies, such as the U300, U400 and V400 series wall and partition designs described in the Fire Resistance Directory. The profile illustrated is a 1-hour-rated fire wall with a 5 1/2-inch wall thickness. It is applicable as a demising wall between high-rise residential units or hotel rooms, as a corridor wall in these same applications, and as a wall in a commercial office or educational setting with a high sound transmission class (STC). While the building code minimum in many areas is an STC of 50, most users look for increased performance of 55 or more. The wall in the illustration with an STC of 57 provides a 2-point cushion to an already high-STC-rated wall. Fire-rated acoustically enhanced gypsum board comes in STC ratings of up to 61.

framing and the UL-classified gypsum board, the UL-classified gypsum board layer(s) required for the design should be installed as indicated in the design as to fastener type and spacing, except that the required fastener length should be increased by a minimum of 5/8 inch. For UL-rated walls of the U300, U400 and V400 series designs, the outer layer should be treated with joint compound and paper tape.

Acoustically enhanced products are available in 4-foot-wide panels in lengths of 8 feet, 9 feet, 10 feet and 12 feet, and in a variety of profiles, including nonrated wood- and metal-stud designs and 1-hour-rated metal-stud wall designs with STCs ranging from 57 to 61. Architects should be aware that the use of acoustically enhanced products in actual installations may not produce the same results as were achieved in controlled laboratory conditions.

Resilient Furring Channels. Resilient furring channels are designed for sound control by separating the gypsum board from framing members, thereby eliminating a direct pathway for the transmission of noise and vibrations from adjoining areas. In use since the 1960s, resilient furring channels are inserted between one gypsum layer and the wall frame, and can add as many as five STC points. Acting as a shock absorber, the resilient channel softens vibrations coming from either side of the wall. Not all channels are acoustically effective resilient channels. Hat channels, z-channels, and other lightweight metal furring systems may be similar in appearance, but they are too rigid to offer any acoustical benefit.

Resilient furring channels suffer a long history of high failure rates partly because of their potential for faulty installation. It is important to install them correctly as improper installation can void any acoustical benefit. Resilient channels have a wide flange and a narrow flange, with a slotted element in between. On walls, channels should be mounted perpendicular to the framing with the narrow flange along the bottom. A common mistake is to install the furring channel upside down, which severely reduces and can even negate its soundproofing effect.

When installing gypsum board the screws should be connected to the channels between the studs or joists. Screwing them into the wood behind them will "short circuit" the resilient channels because such an inflexible connection defeats their acoustical benefit. Using screws of incorrect lengths will cause the screws to penetrate into the stud framing, to similarly negative effect. Walls should have a slight flex to them when resilient channels have been properly installed. If it is not possible to flex the wall, the channels may have been shorted out by screws fastened into the framing.

Even if the system is installed properly, the solution can very likely be inadvertently compromised by the building occupants. Even inserting a nail into the wall in order to hang a picture, bookshelf or other item can "short-circuit" the acoustical solution if the nail causes the gypsum board to come in contact with a stud.

Staggered or Double-Studded Walls. A double-studded wall is literally two separate rows of studs, top and bottom plates installed and separated from each other. Staggered or double-studded walls will also structurally decouple, or mechanically separate, the two sides of a wall to make it harder for sounds to pass through. Staggered walls are constructed by using a common plate wider than the two rows of offset studs. Studs are set in a zigzag pattern, with each side of the wall attached to a different set of studs. With no common framing of the walls, sound is not directly transmitted from one wall to another. The drawback of staggered or double-studded walls is that this construction tends to increase labor and material costs. Furthermore, the depth of the required partition takes up valuable floor space.

Sound Isolation Clips. Based on the premise that only isolation can effectively reduce low-frequency noise, sound isolation clips are used together with furring channels to fasten the gypsum board to the wall assembly while simultaneously eliminating the hard connection of the wall substrate to actual structural members. In this way, the wall design provides acoustical decoupling. Clips attach easily to wood, steel, or concrete and can add up to 20 STC points to most walls. Here again, relatively higher labor and material costs for wall construction are a disadvantage. In addition, the large number of parts and pieces required for a sound isolation clip system make for a complicated installation with significant potential for error. ■

This article continues online at
http://construction.com/CE/articles/0707national-1.asp

See Quiz on the Next Page

To receive AIA/CES credit, you are required to read the additional online text, which can be found at ***http://construction.com/CE/articles/0707national-1.asp***
The quiz questions below include information from this online reading.

Program title: **"Market Trends Drive the Need for Effective Sound Solutions" (07/07, page 163).** AIA/CES Credit: This article will earn you one AIA/CES LU hour of health, safety, and welfare credit. (Valid for credit through July 2009). **Directions:** Refer to the Learning Objectives for this program. Select one answer for each question in the exam and fill in the box by the appropriate letter. A minimum score of 80% is required to earn credit. **To take this test online, go to construction.com/CE/**

LEARNING OBJECTIVES

After reading this article, you should be able to:

- Discuss trends driving the need for wall partitions that can reduce sound transmission
- Explain key acoustical terms and concepts
- Specify the appropriate sound control system for your projects

Questions

1. **The chief noise complaint cited by residents of multifamily housing was:**
   - ■ **a.** airplanes..
   - ■ **b.** neighbors' conversations.
   - ■ **c.** passing trucks.
   - ■ **d.** loud music.

2. **The level of airborne sound is measured by decibels.**
   - ■ **a.** True.
   - ■ **b.** False

3. **Which is considered an acceptable goal for sound insulation?**
   - ■ **a.** STC 55
   - ■ **b.** 60 dB
   - ■ **c.** 125 Hz
   - ■ **d.** HUD Grade 2 building

4. **Which helps to decrease sound transmission through a wall?**
   - ■ **a.** decreasing the wall cavity
   - ■ **b.** removing fiberglass
   - ■ **c.** increasing mass
   - ■ **d.** using wood studs

5. **One new product in the field of sound isolation is:**
   - ■ **a.** resilient furring channels.
   - ■ **b.** acoustically enhanced gypsum board.
   - ■ **c.** sound clips.
   - ■ **d.** wood fiber sound board.

6. **Resilient furring channels achieve sound control by:**
   - ■ **a.** separating the gypsum wallboard from the framing members.
   - ■ **b.** adding mass.
   - ■ **c.** increasing structural damping.
   - ■ **d.** adding absorptive materials.

7. **A drawback of sound isolation clips is:**
   - ■ **a.** adding too much mass.
   - ■ **b.** the increased number of parts, complicated installation.
   - ■ **c.** low performance.
   - ■ **d.** that too much floor space is required.

8. **Sound-reducing wall partitions often do not live up to their STC ratings because of:**
   - ■ **a.** poor design.
   - ■ **b.** inferior materials.
   - ■ **c.** faulty installation.
   - ■ **d.** unrealistic goals.

9. **Installation of acoustically enhanced gypsum board is:**
   - ■ **a.** very difficult.
   - ■ **b.** best over an insulating blanket over the framing members.
   - ■ **c.** challenging because it can lead to "short circuiting."
   - ■ **d.** similar to the installation of standard gypsum board.

10. **In laboratory testing, "flanking paths" that ease sound transmission are eliminated.**
    - ■ **a.** True
    - ■ **b.** False

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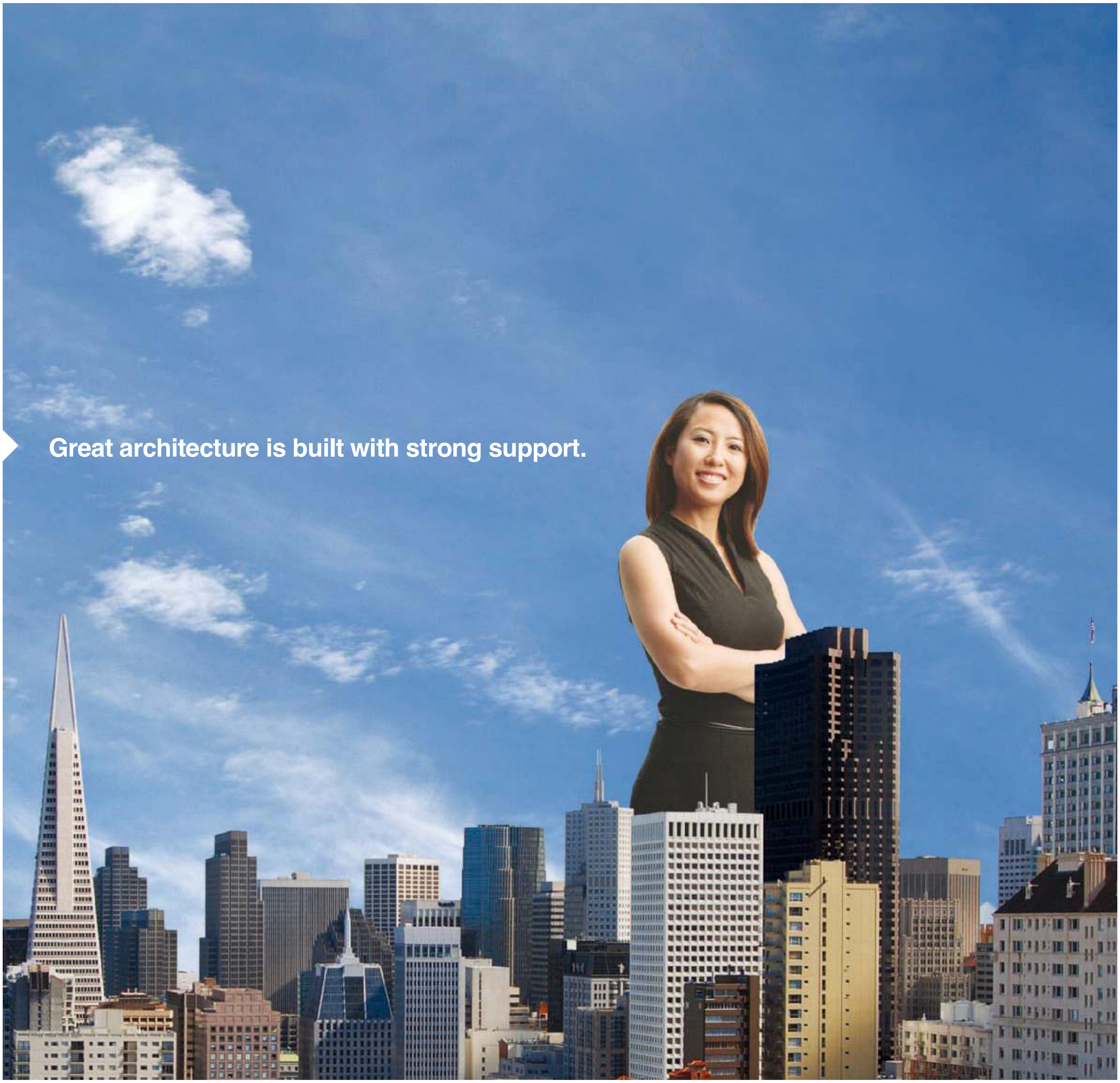
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Residential

These houses convey as much about porosity and openness as they do about protection and shelter

BRIEFS

Retailers IKEA and MUJI bring housing to the masses through their latest ventures—in residential development. IKEA's division BoKlok (Swedish for "smart living") has already built 3,500 homes across Scandinavia and is now coming to the U.K. MUJI (taken from a Japanese phrase meaning "No Brand Quality Good") carries a line of prefab houses that start at just $115,000. Adding to 387 outlets in 15 countries, MUJI expands to the U.S. this fall. Go to www.boklok.com; www.muji.net/eng/.

Condo hotels get hot in the resort and hospitality real estate market. Club Med has announced a new development plan that includes the company's first-ever condominium resort development. Club Med Buzios, located on a peninsula east of Rio famed for being the "St. Tropez of Brazil," will be the group's first condominium resort development, with 300 units sold to individual buyers. Find our more at www.clubmed.com.

House_n, a research group at MIT, explores how new technologies, materials, and strategies for design can facilitate evolving places that respond to the complexities of life. The PlaceLab, a residential condominium in Cambridge, Massachusetts, is a unique "living laboratory" that has been constructed to explore these ideas. It is designed to study people and their patterns of interaction with new technologies and home environments. Read more about the project at architecture.mit.edu/house_n/.

Jean Prouvé's La Maison Tropicale sold on June 5 for $4.97 million at Christie's International in New York. It is the third house to be sold at auction as an art object. The small aluminum-and-steel home, built in 1951, was conceived by Prouvé as a utopian prototype for prefabricated housing.

Green building branches out to home construction. The percentage of new homes built with ecofriendly features will rise from 2 percent in 2005 to as much as 10 percent by 2010, according to the *Residential Green Building SmartMarket Report*, published by McGraw-Hill Construction with support from the National Association of Home Builders. Those interested can download the report at www.construction.com/greensource/reports.asp. *Danielle Rago*

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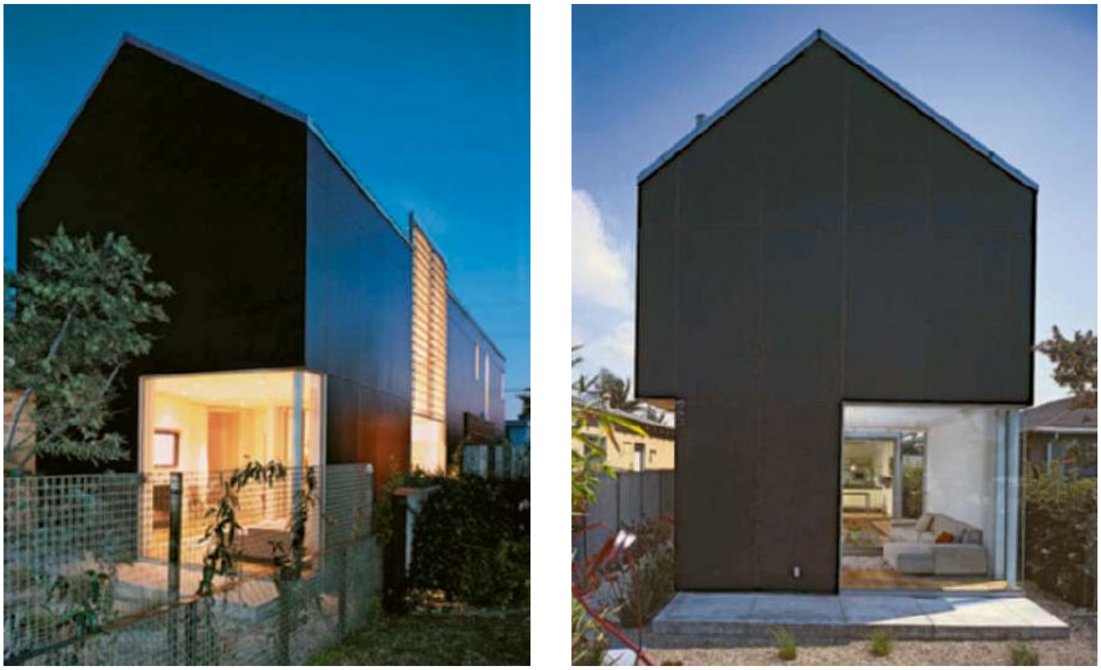
While realizing the programmatic needs of their clients, the architects in this section also explored the interface between inside and outside. The four houses shown here take unique approaches to this boundary, each controlling the quality and quantity of daylight and air in a different way.

The tight suburban site of the Coconut House prompted the architect to carve out an interior courtyard, which allows abundant light inside, provides a private outdoor living room, and facilitates cross ventilation. At Les Abouts, a house in Quebec, Pierre Thibault used the shade from nearby trees and full-height operable awning windows to temper the light coming in from generous fenestration.

A wall of metal screens in the Low-Country Residence protect and shade a southwestern wall of glass while allowing breezes to enter. In the open position, the screens permit daylight to flood in. Similarly, large folding doors and shutters on the Inverted Guest House in Lake George, New York, control the amount of light and air that can penetrate inside. *Jane F. Kolleeny*

PHOTOGRAPHY: © JULIUS SHULMAN



The living room window (above two) allows views to the rear of the house.

lee+mundwiler architects' **Coconut House** tweaks iconic forms to deliver views without losing privacy

By Russell Fortmeyer

In Los Angeles, a city known for its dearth of public spaces, architects have expressed the issues of privacy and transparency in the home in often-unusual ways, typically motivated by a perceived break with architectural tradition. The optimistic Case Study architects of the 1950s and 1960s gave us the glass house on the hill, exposed to the entire city. A less optimistic generation of the 1970s and 1980s designed either compounds, hidden behind walls, or faux ruins—houses constructed of common, tough materials that appear outwardly hostile toward the public domain—responses to the city's worsening urban situation.

Santa Monica–based lee + mundwiler architects responded to this local legacy in a 2005 project, the Coconut House (winner of a 2006 AIA Housing Award [Record, July 2006, page 206], and photographed here by the legendary Julius Shulman), which neatly explores the conceptual dichotomy of open and closed, public and private domains. "We like to provide privacy, but we didn't want to overdo it, either," says Stephan Mundwiler, AIA, who designed the house with his partner, Cara Lee. "We had no desire for the client to sit on the street, which led us to design an interior courtyard."

The two-story, 1,800-square-foot house, dubbed Coconut because of its dark exterior shell and white interior, is located in the densifying coastal neighborhood of Marina del Rey. The residence appears, in Mundwiler's terms, like a child's drawing of a house—in section, it's a simple, 18-foot-wide rectangle topped by a gable and then extruded back 64 feet to the rear of the relatively narrow, 25-by-100-foot site. From the street, a large window for the living room and a narrow second-floor overhang for the side entrance appear as voids, laying waste to any preconceptions of the house as business-as-usual.

The wood-framed house's inventiveness emerges in its plan, where the architects subtracted a two-story volume between the front living room and the rear kitchen and dining room to form the interior courtyard. This space doubles as an additional dining room, revealingly framed by large, folding glass doors on the first floor and by windows on the second floor.

This transparent gesture allows great cross ventilation and uninterrupted views through the house—between rooms and also out to a busy street—but appears rather secluded when looking into the house

Project: *Coconut House, Los Angeles, California*

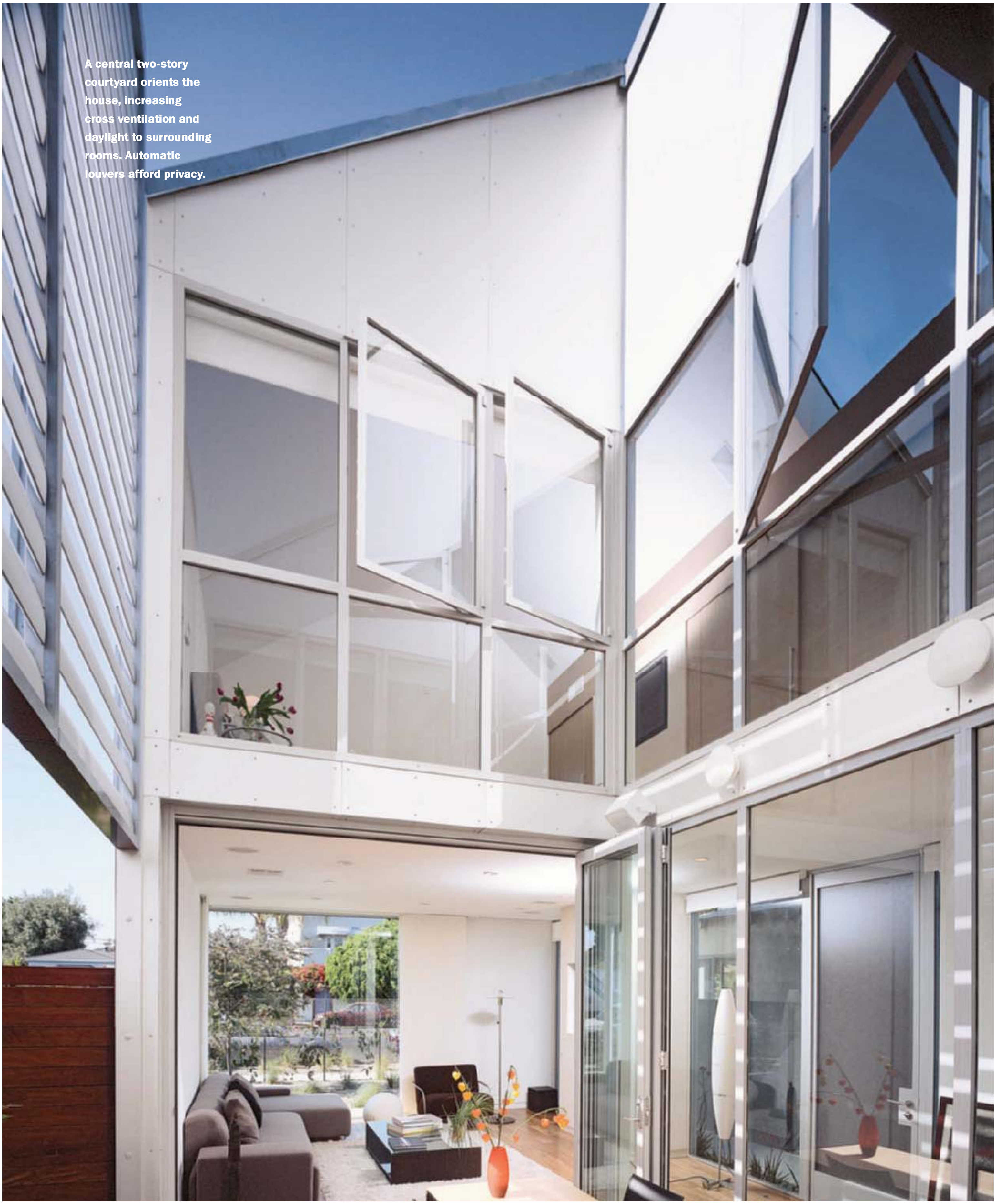
Architects: *lee + mundwiler architects—Stephan Mundwiler, AIA, principal architect; Cara Lee, project designer*

Engineer: *CTW Engineers—Christian Williamson*

General contractor: *Niagara Construction*

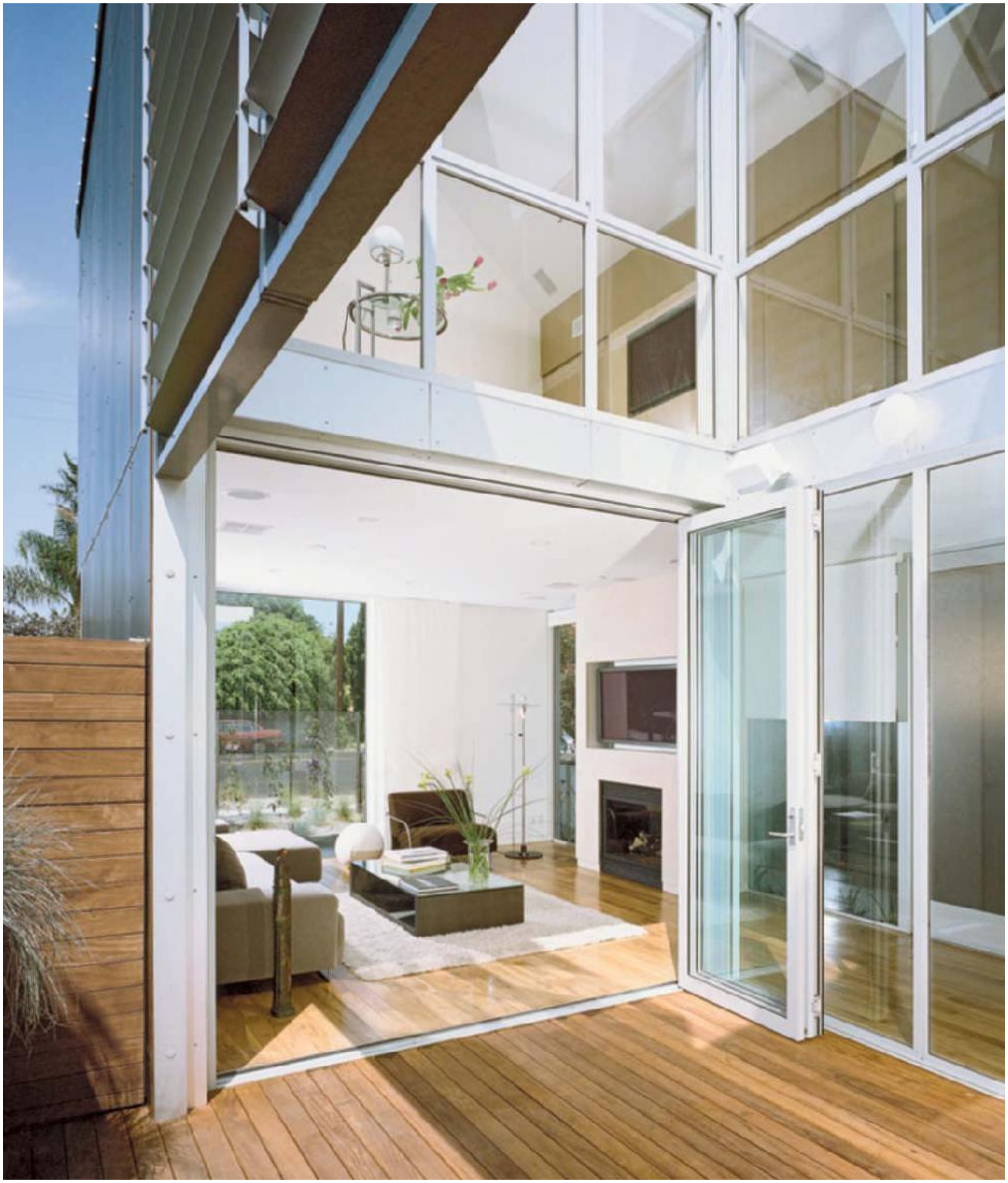
Landscape architects: *lee + mundwiler architects*

PHOTOGRAPHY: © JULIUS SHULMAN & JUERGEN NOGAI, EXCEPT AS NOTED; JUERGEN NOGAI (THIS PAGE)

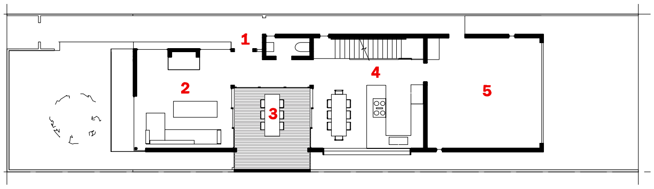


A central two-story courtyard orients the house, increasing cross ventilation and daylight to surrounding rooms. Automatic louvers afford privacy.

Aside from the folding glass doors surrounding the courtyard, the interior walnut floor planks line up with exterior decking to reinforce the indoor/outdoor quality of the house (right).



1. *Entry*
2. *Living room*
3. *Courtyard*
4. *Dining/kitchen*
5. *Garage*
6. *Master bedroom*
7. *Office*
8. *Bathroom/closet*
9. *Bedroom*



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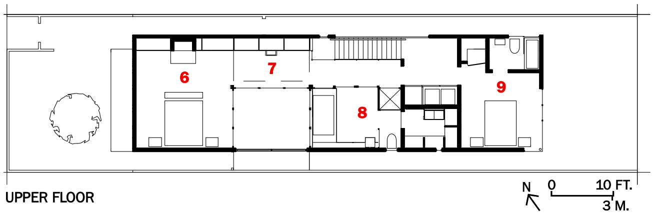

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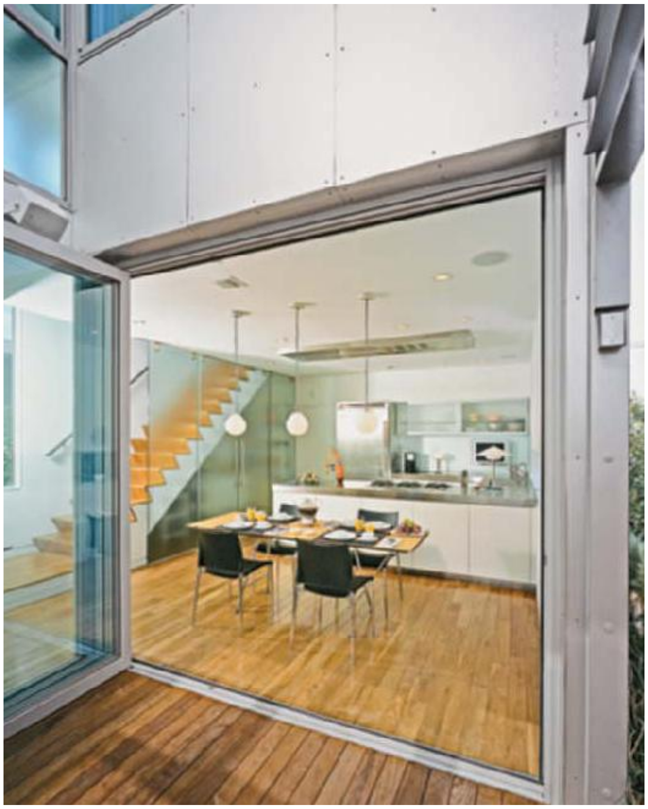
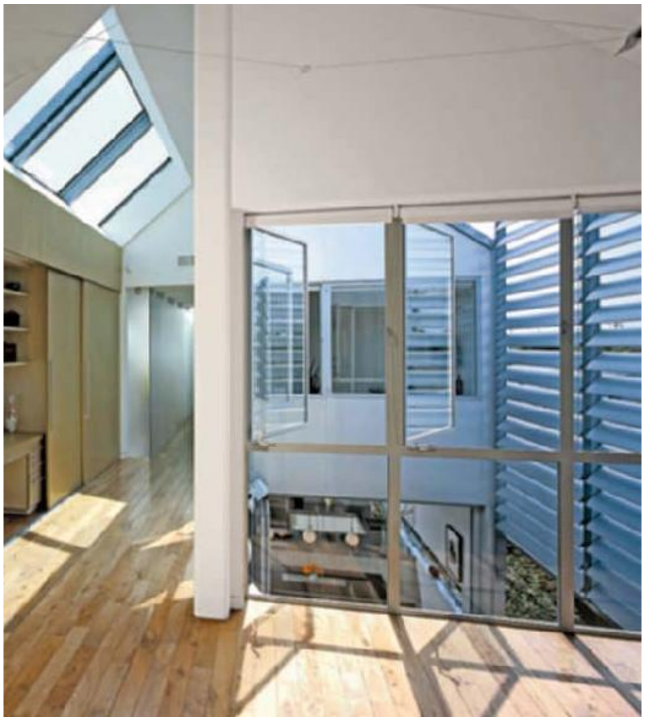




Frosted glass hides a pantry (above) and reveals the stair. Regardless of time of day, sunlight pervades the two-story courtyard through east-facing skylights in the master bedroom office (above right) and through west-facing operable louvers and a ground-floor garden-wall opening (right).

from the sidewalk. The architects achieved this effect, without sacrificing privacy, in part by enclosing the second-story opening of the courtyard with a scrim of operable louvers. The client can automatically control her views, as well as sunlight and breezes.

Unlike the client's previous, conventional single-story bungalow on the site—which she elected to tear down—the new house affords views through large windows flooded with Southern California sunshine. White walls and a creamy limestone on the living room fireplace and in the upstairs master bath intensify the effect of brightness, even with coastal fog. The kitchen and dining room share a low, slot window to the narrow side yard. A frosted-glass enclosure hides both a makeshift kitchen pantry and the staircase to the master and guest bedrooms on the second floor. Another slot window in the stair looks across adjacent rooftops.

Whereas the guest bedroom is simple and functional, the master suite combines a bathroom, office, and bedroom into a loftlike retreat distinguished by vaulted ceilings and glass partitions. Opposite the courtyard volume, a skylight floods the walk-through office space with light. The glass doors to the bathroom sit within a glass wall that also becomes one side of the shower.

Although the Coconut House was built for a single professional, its restrained formal gestures and volumetric clarity redress the American urge for bigness in ways square footage alone cannot. The house's simple material palette—walnut floors; coffee-colored, fiber-core wood panels on the exterior; a standing-seam metal roof; ironwood for the courtyard deck; and stainless steel in the kitchen—further harks back to those Case Study days. It's a backward glance much in keeping with other recent L.A. residential architecture, which overlooks the fussy details and junk materials of the 1970s and '80s. And then it makes sense that Shulman, the magician of midcentury fabulousness, would want to photograph this house. ■

ONLINE: To see a complete list of sources, and to rate this project, go to ***architecturalrecord.com/residential/***. Submit your residential project to ***construction.com/community/gallerylist.aspx***.

Sources

Exterior cladding: *Prodema (phenolic resin-bonded cellulose fiber-core panels)*

Interior glass partitions: *Allwood Design*

Skylights: *Sun Valley Skylights*

Flooring: *Walnut hardwood*

Downlights: *Louis Poulsen*

Hardware: *Technolumen/Bauhaus*

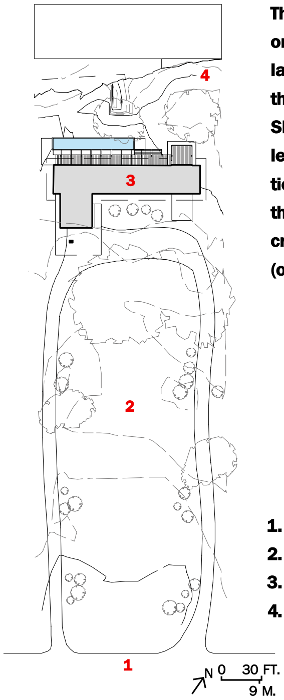
Plumbing fixtures: *Boffi*

Louvers: *Louvertec*

Kitchen hood, master bed, dining table: *lee + mundwiler architects*

PHOTOGRAPHY: © JUERGEN NOGAI (TOP RIGHT)

The house looks out onto an expansive front lawn (top left) and, at the back, a lap pool and Shem Creek (bottom left). In the closed position, the screens, with the roof's overhang, create a shaded porch (opposite).



1. *Main access*
2. *Lawn*
3. *Residence*
4. *Shem Creek*

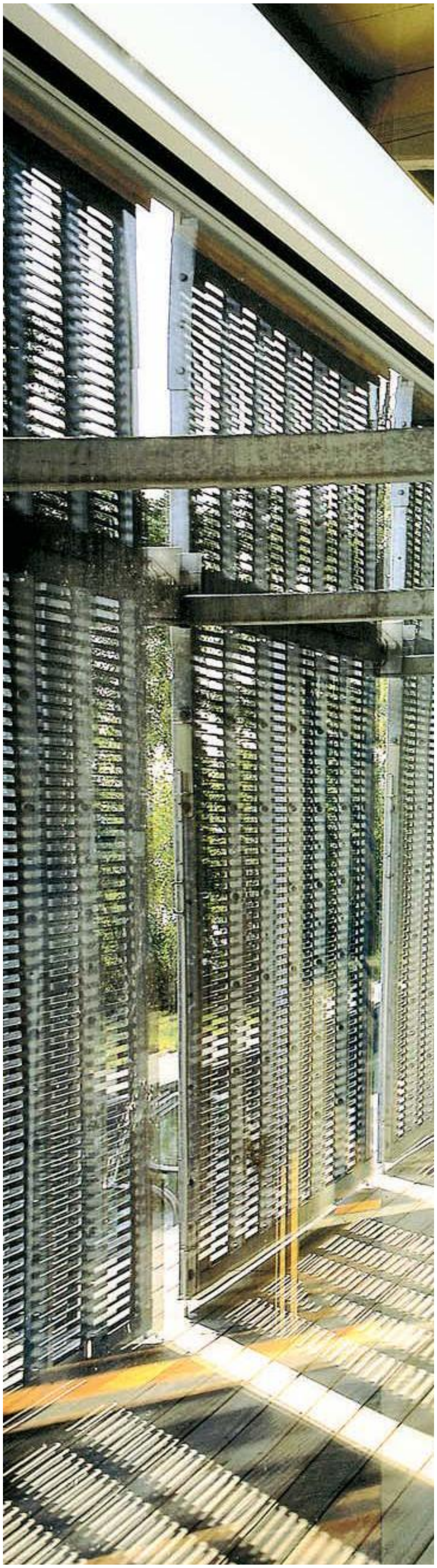
Living the high life in the **Low-Country Residence**

By Beth Broome

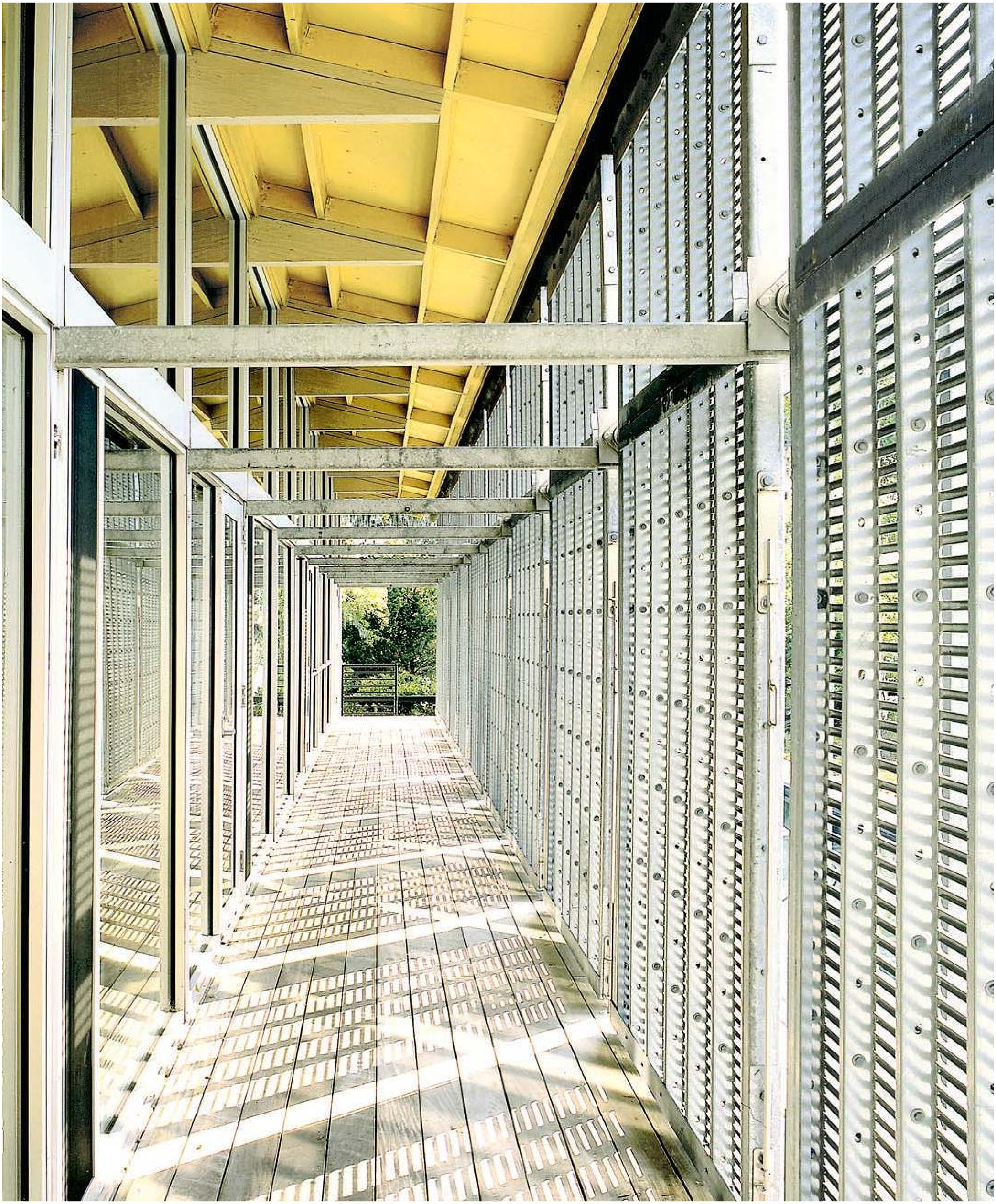
Down a long, U-shaped gravel drive and surrounded by palm trees and Spanish moss–shrouded live oaks, the Low-Country Residence opens onto Shem Creek in the Charleston, South Carolina, suburb of Mount Pleasant. On a cloudless spring afternoon, as a pelican coasts on the breeze and pleasure boats cruise along the creek to the nearby marina, it's hard to imagine the harsh turn the weather can take here. With that in mind, Raleigh, North Carolina–based architect Frank Harmon, FAIA, has designed a house that takes nature's good with its bad by inviting the sublime light and views in while also protecting against the elements. "The house feels remarkably open," says Harmon, "but at the same time, it is a place of refuge and shelter."

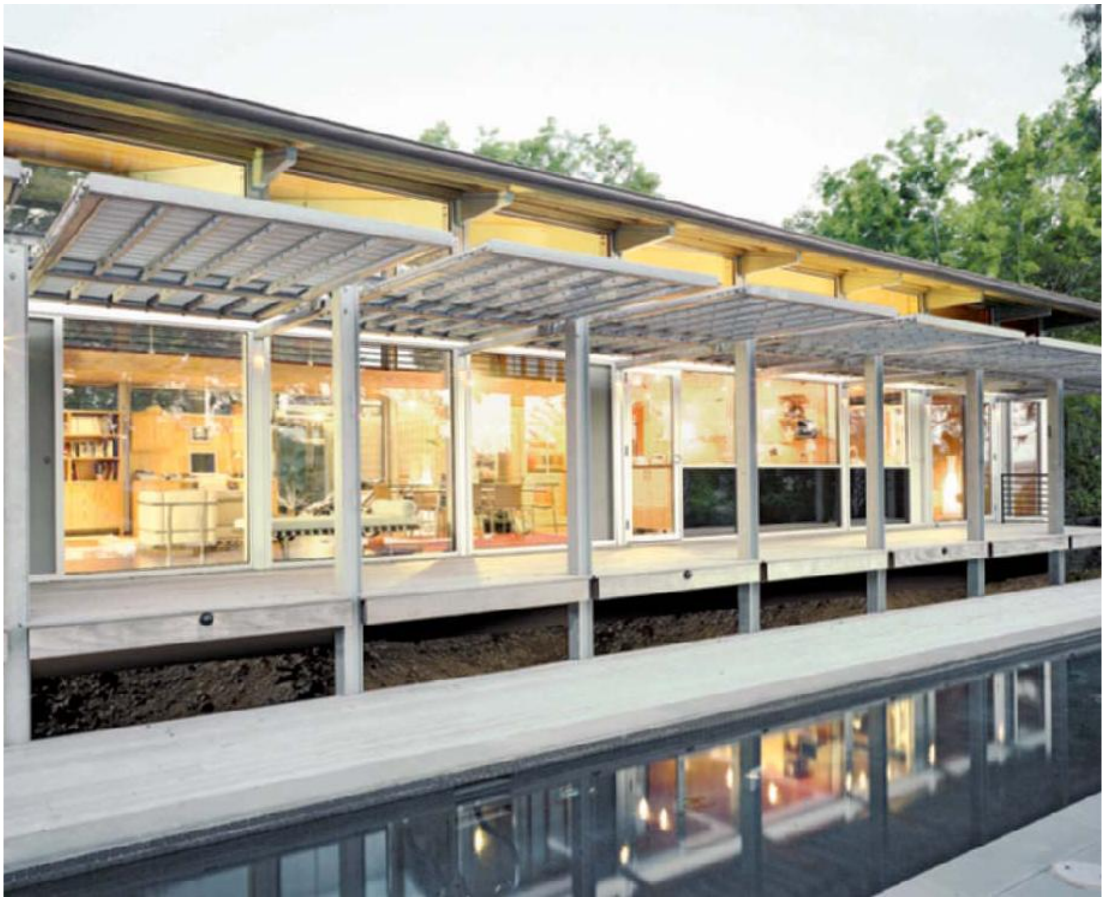
The client, a doctor, wanted a home with a large living area that he could share with his son, and ample work space for restoring old cars and boats. An avid bird-watcher and fisherman, he envisioned a house of glass that would bring him closer to the salt marsh and the variety of wildlife it attracts.

Project: *Low-Country Residence, Mount Pleasant, South Carolina*
Architect: *Frank Harmon Architect—Frank Harmon, FAIA, principal; Erin Sterling, project manager*
Engineer: *John Moore (structural); Orbit Engineering (mechanical); S&ME Geotechnical (geotechnical)*
Landscape: *Judy Harmon*
General contractor: *Design Build Corporation*

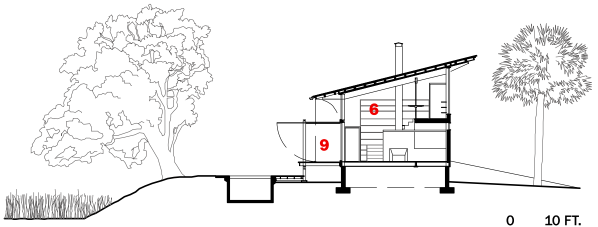


PHOTOGRAPHY: © RICHARD LEO JOHNSON/ATLANTIC ARCHIVES





1. *Entry*
2. *Bedroom*
3. *Bath*
4. *Kitchen*
5. *Dining*
6. *Living*
7. *Screened porch*
8. *Garage/workshop*
9. *Deck*



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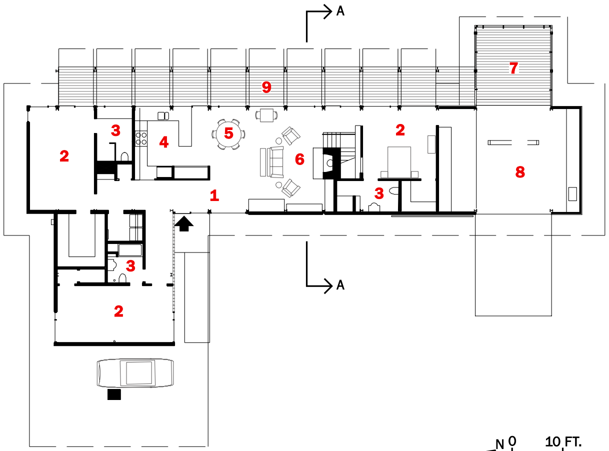
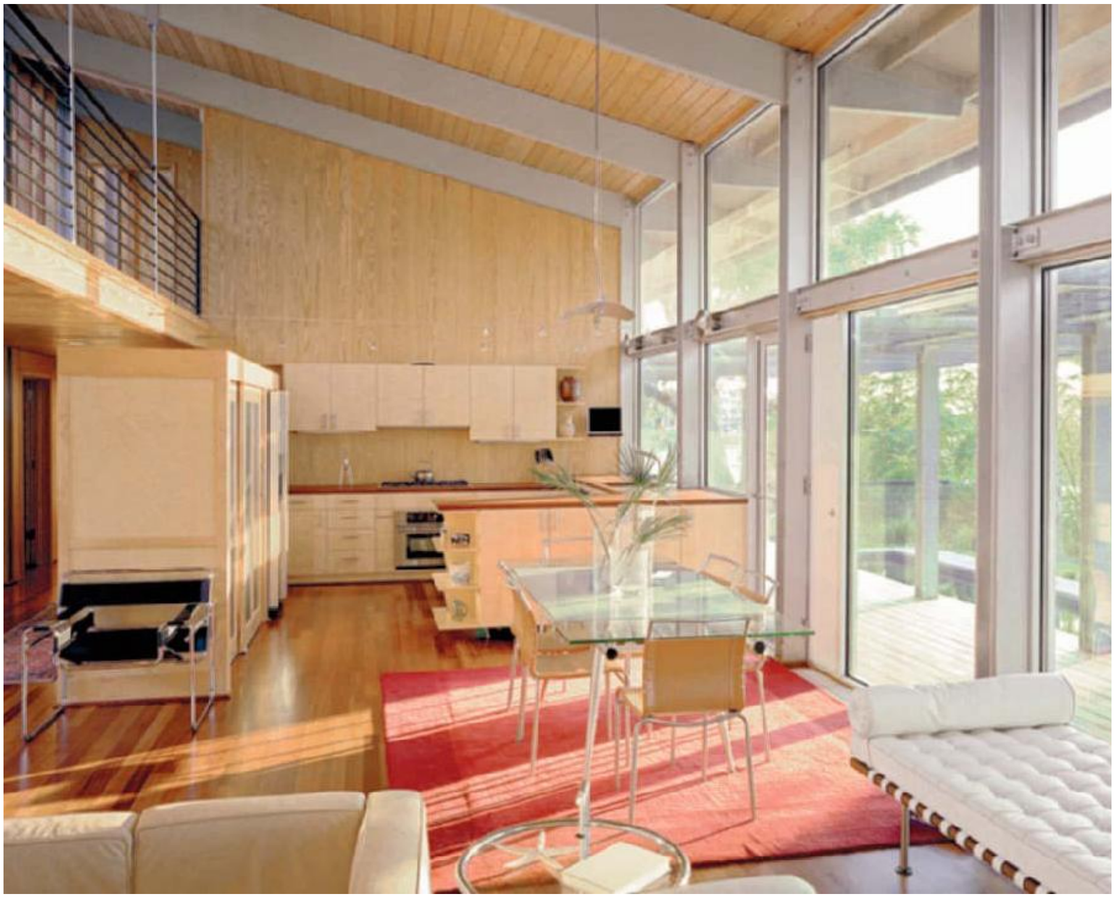


FLOOR PLAN

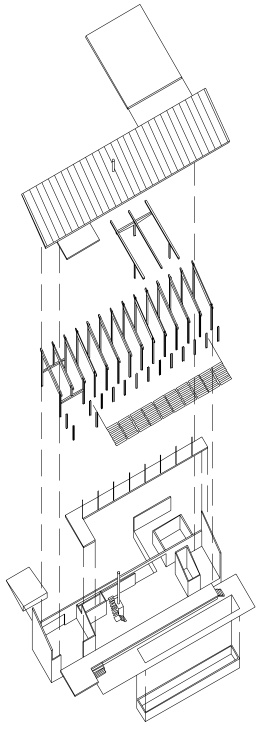
With the screens in the open position, a kind of colonnade is formed that runs parallel to both the lap pool and the creek beyond. Doors and narrow operable windows on the house's front and back provide natural ventilation.

After investigating many locations on the 1.5-acre property, the client and architect decided to build on the obvious one—the creek-facing footprint of the small ranch house that had previously occupied the site and that they dismantled and donated to Habitat for Humanity. "On all of my projects, the site is more important than the client," says Harmon. "The site has been there longer than they have and will be there longer than they will." Maximizing the stunning view was a temptation too difficult to resist. But like most good things in life, it came with a price: On the southwest elevation, extensive glazing would turn the house into an oven as the hot southern sun moved across the sky. And there were other natural forces to contend with—notably, the plot sits squarely in a hurricane zone and, perhaps surprisingly, an earthquake zone as well.

Long and narrow, the Low-Country Residence has its gaze focused on the creek and the lap pool that runs parallel to it. The simple, single-story design includes an ample, double-height living area flanked by bedrooms on either side, and a guest bedroom in the back. A stair leads up to a balcony suspended from the roof beams that spans the length of the house, giving access to utility and storage areas and offering a bird's-eye view down into the living space, the large garage, and even



In the afternoon, the sun streams in through the open screens, giving life to the honey-colored interior. The shifts in light and the view out to Shem Creek can also be appreciated from the heights of a balcony (top left in photo).



EXPLODED AXONOMETRIC

the bedrooms. The house's steel-and-laminated-southern-yellow-pine framing rests on matt footings, addressing high wind and seismic concerns, and a single-plane, standing-seam roof with broad overhangs provides shading and channels rain water into a cistern used for irrigating the landscape.

To moderate summer heat gain through the extensive southwest-facing glazing, Harmon designed a shading system that consists of 10 800-pound screens: hand-fabricated frames encasing perforated-metal panels typically used in industrial decking. In its raised position, the system opens the house onto the landscape and allows daylight to flood inside. In its lowered position, it creates a protected exterior porch along the length of the facade, shading the residence while allowing cooling breezes to enter through doors and narrow operable windows that appear again on the front of the building. Significantly, the system also protects the glass wall against hurricane-force gales and the debris they hurl. An engineering feat fabricated by Christian Karkow, a Raleigh, North Carolina–based sculptor and metal fabricator, the screens, made of hot-dip galvanized steel to withstand the ravages of the corrosive salt air, can be effortlessly swung open by one person.

Though large for just one full-time resident, the 2,900-square-foot house does not feel big. Thoughtful planning has resulted in a collection of spaces that are well lived in. Behind the street-facing facade, which could be considered somewhat imposing next to its Colonial- and Ranch-style neighbors, the interior features an abundance of local southern yellow pine—on the walls, on the ceiling, in the trim—a move that is in sync with the house's other forthright qualities. Along the banks of Shem Creek, Harmon has created a dwelling that introduces its own version of southern hospitality and is quite at home in the beauty of the South Carolina coastal region known as the Low Country. ■

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Sources

Metal/glass curtain wall: *Kawneer*

Custom screens: *Christian Karkow*

Standing-seam roof: *Galvalume*

Built-up roofing: *Bray*

Windows and exterior doors: *Kawneer*

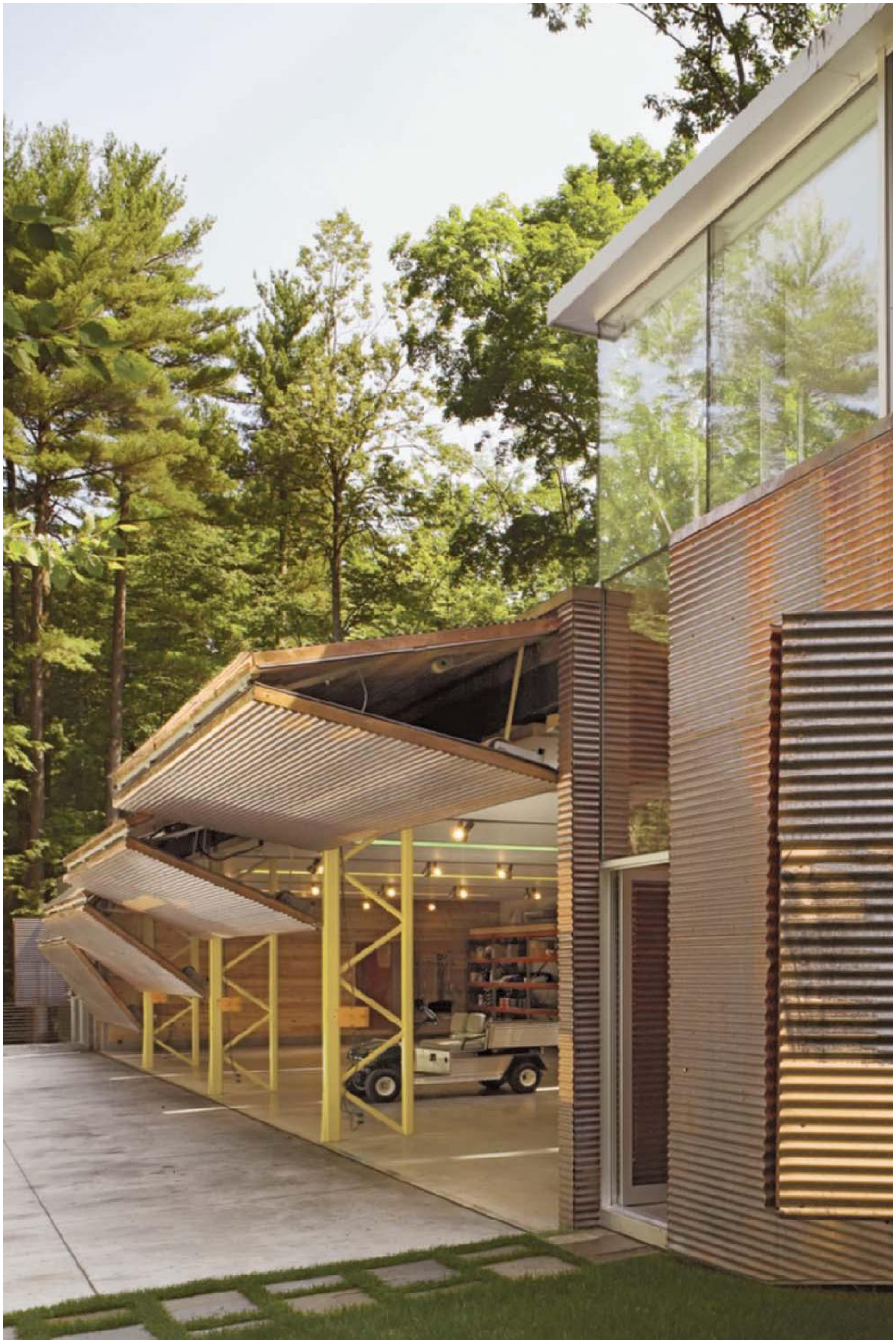
Plastic glazing: *Polygal*

Upswinging doors: *Cornell*

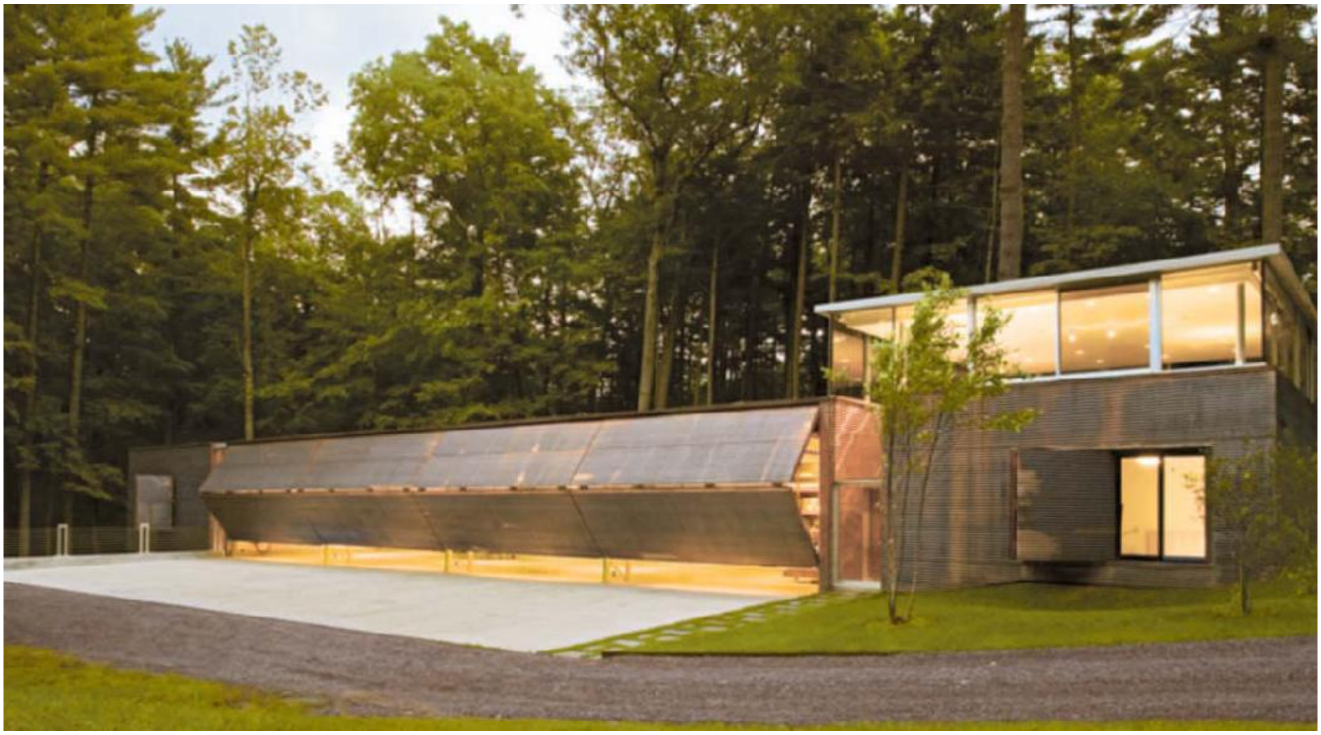
Cabinets: *Raleighwood Cabinets*

Paints and stains: *Cabot*

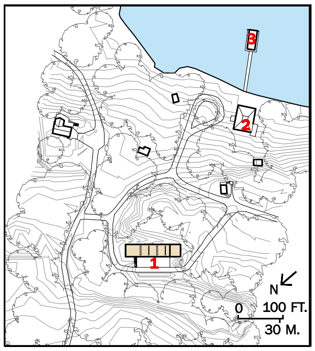
Copper gutters: *Classic Gutters*



Airplane-hangar doors on the garage (left) and bifold shutters on bedroom windows (opposite) allow the clients and their guests to adjust the building's relationship to its surroundings. As he does with most of his projects, Gluck had his firm's construction division, AR/AC Architectural Construction Services, act as the general contractor.



Peter Gluck builds an open-and-shut case for inventive design with the **Inverted Guest House**



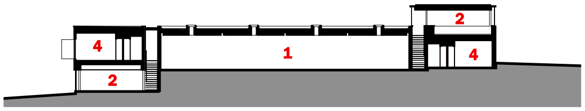
1. *Inverted Guest House*
2. *Main house*
3. *Boat house*

By Clifford A. Pearson

"I wanted to build a barn," says Richard Yulman, the client for the Inverted Guest House in Lake George, New York. "Just a country barn where we could park cars and put stuff in the winter." What started as a simple shed kind of project, though, became a 5,600-square-foot building that features a pair of two-bedroom guest apartments on either side of an eight-car garage. With its rugged-yet-elegant copper cladding and flat roofs, it looks like no barn. But its industrial materials capture the utilitarian spirit of rural buildings, and its large, folding doors and shutters connect it to the light and views of its wooded site.

The guest house/garage is the third in an ongoing series of projects that New York City–based architect Peter Gluck has designed for Yulman's 17-acre estate on Lake George. About nine years ago, Yulman, whose primary residence is in Florida, hired Gluck to renovate the property's main house as a summer retreat for his family. Then a few years later, he commissioned him to design a small boathouse on the lake. By the time he asked Gluck for "a barn," he and his architect had developed a

Project: *Inverted Guest House, Lake George, N.Y.*
Architect: *Peter L. Gluck and Partners—Peter Gluck, principal; Jennifer Bloom Leone, Natalie Wigginton, Thomas Zoli, project team*
Engineer: *Robert Silman Associates (structural)*
Interior designer: *Holmes Newman and Associates*
General contractor: *AR/CS Architectural Construction Services*



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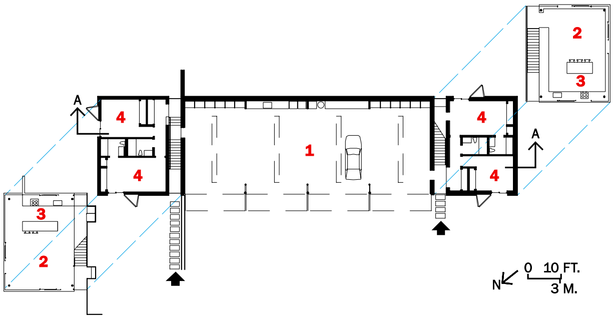
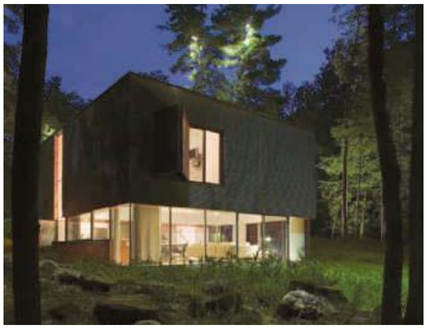
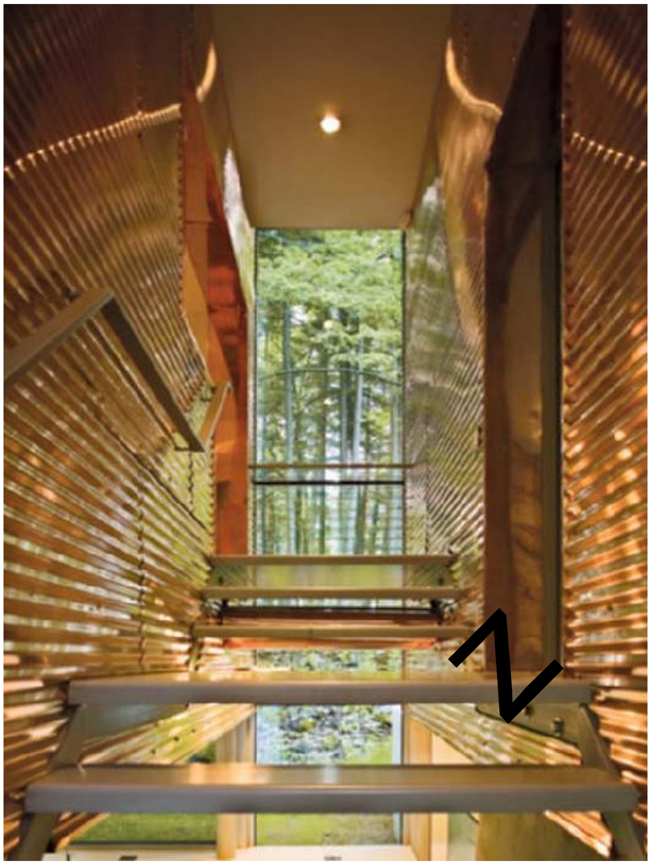


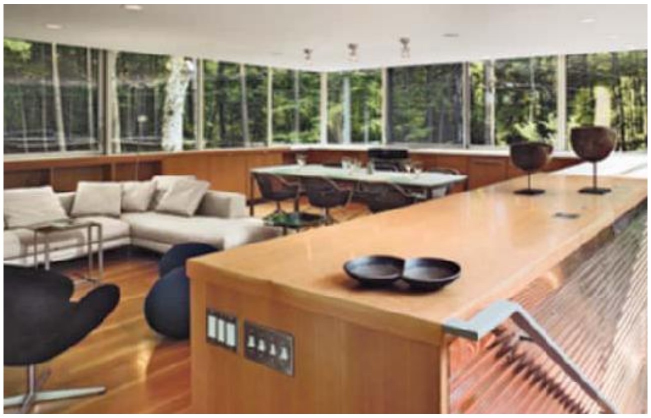
1. *Parking/storage*
2. *Living*
3. *Kitchen/dining*
4. *Bedroom*

PHOTOGRAPHY: © PAUL WARCHOL



Gluck designed the guest units as inverted twins with a transparent living/dining space on the lower floor of one (left) and the top of the other (bottom). Each unit has its own set of stairs (below).





close relationship. So when Gluck proposed expanding the program to include quarters for guests and building it on an almost forgotten part of the property behind a small ridge, Yulman trusted him. Although Yulman had traditional tastes in architecture when he first bought the lakeside property and its early-20th-century house, he developed a more contemporary sensibility while working with Gluck. For the guest house/garage, he was ready for a Modern design.

Gluck selected the site because it offered a degree of separation from the main house, ensuring privacy for guests and keeping cars and equipment out of sight. Taking advantage of a 10-foot drop across the length of the lot, he designed a long bar building where one end pops up above the ground floor and the other slides down. The guest apartment that pops up has a glass-enclosed living/dining/kitchen space on the upper level and a pair of copper-clad bedrooms below, while its twin on the other side of the garage follows an inverted scheme.

Simple contrasts supply most of the design impact, creating an effective back-and-forth between opaque and transparent materials, open and closed elements, rooms with big views and those with small, framed ones. To set apart the guest quarters, Gluck inserted a vertical glass slot between each unit and the garage, creating a transparent reveal where guests enter and find metal stairs going either up or down to the main living space. Corrugated-copper walls in these entry/stair halls bring the exterior's dominant material inside and create a lovely, warm glow when the sun hits them. Interior finishes are as simple as those on the outside: mostly Douglas fir, white drywall, white artificial-stone counters, and a few touches of copper. As with most of Gluck's projects, his firm's construction division, AR/CS Architectural Construction Services, acted as general contractor, which reduced costs, says the architect.

Some guests might think that the unit with the upper-level living room offers the best place to hang out because it enjoys views to the main house and the lake. And, indeed, it has a graceful, light-filled quality to it. But the other unit has its own charms, offering a living/dining space that feels as if it is in the woods. Eat here and you think you're at a picnic (without having to worry about the rain ruining the fun). While the bedroom floors are wrapped in copper and read as opaque layers, each bedroom has a window with a large, bifold shutter that can be opened or closed by hand from the inside. Instead of big views and plenty of daylight, these windows establish a more intimate relationship with the outdoors. Sometimes less is more.

Four airplane-hangar doors on the eight-car garage act as a different kind of bifold device. Stabilized by vertical steel trusses (the only steel elements in an otherwise engineered-lumber-frame building), the garage doors operate individually and can stop in different positions. With all four open all the way, they can serve as a canopy—useful for when the clients empty the garage of its cars and convert it into an events space. You might not think of partying in a garage, but Gluck's manipulation of openness and enclosure, light and shadow make this possible here. ■

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Sources

Wood windows: *Kolbe & Kolbe*

Aluminum window sliders: *Arcadia*

Aluminum skylights in garage: *Custom by Peter Gluck and Partners*

Bifold garage doors: *Scheiss*

Locksets: *Modric and FSB*

Cabinet hardware: *Hafële*

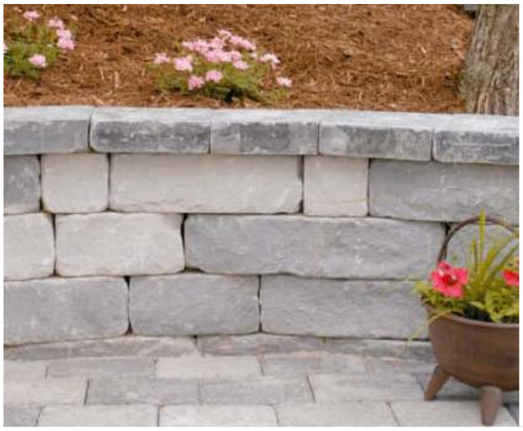
Countertops: *Corian*

Douglas-fir cabinetwork: *Custom by Peter Gluck and Partners*

Downlights: *Juno and Lightolier*

Exterior lights: *BK Lighting*

Light controls: *Lutron*



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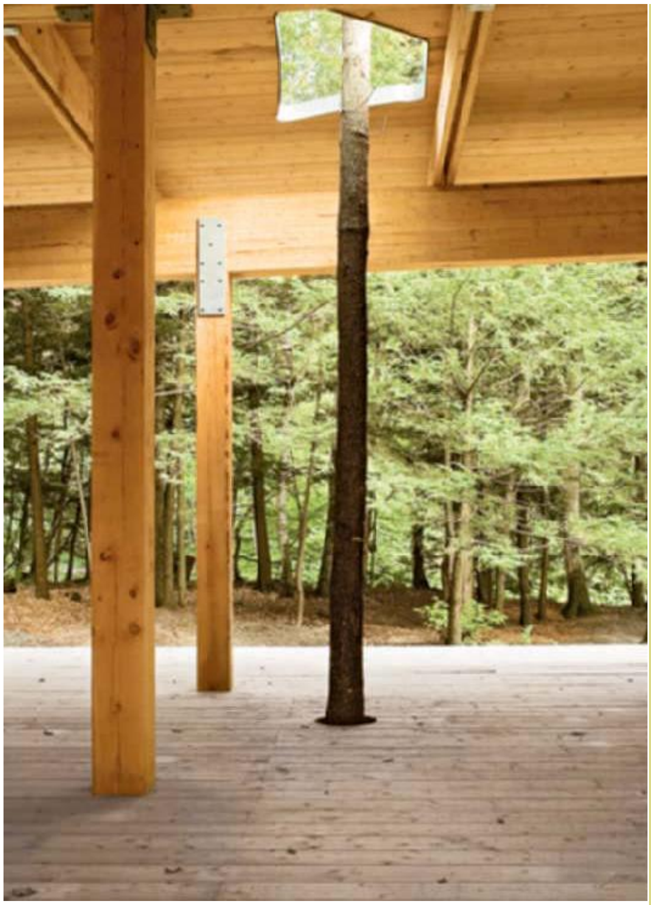
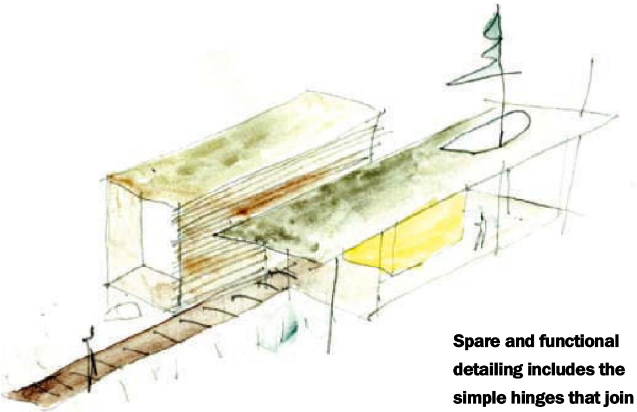


Pierre Thibault's **Les Abouts House** sits quietly in a wooded meadow

By Jane F. Kolleeny



Spare and functional detailing includes the simple hinges that join the structural columns (top). A sketch of the house shows its two primary volumes surrounded by a deck, where one small tree peeks out of a hole made just for that.

Glaciers sculpted the area north of the Great Lakes between Quebec City and Montreal into the immensely fertile St. Lawrence Lowlands. Today, large farms spread out in the open expanses, and small townships like Saint-Edmond-de-Grantham, Quebec, dot the landscape. It is in this village that architect Pierre Thibault of Quebec City crafted Les Abouts, a house designed to invite the outside in. "We wanted to feel nature as closely as possible. We wanted a house open and integrated with the outdoors, with a lot of light," explained one of the two owners. The owners sought a country home that would fit like a glove in the site—in harmony with, rather than impinging on, its surroundings.

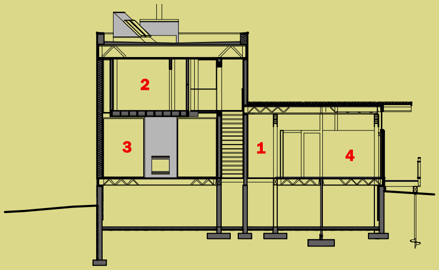
This 2,500-square-foot residence, built in white birch with post-and-beam construction, sits on a wooded site with a small river running through it. Over time, the river's meandering has created a pocket of land. The architect, who labored for two years to find the perfect placement for the house, located Les Abouts in this cul-de-sac, making it possible to view the river from most locations inside. Surrounded on three sides by water, the house hovers like a wooden raft adrift on a sea of soft ostrich ferns, with towering birch, hemlock, cedar, maple, and basswood trees rising around it. The name *Les Abouts*, from the French verb for "to end at or in," refers to the location of this 4-acre parcel of land at the terminus of a 20-acre agricultural plot farmed by one of the owner's families.

From the time the owners engaged the architect in 2002, it would take two years to develop a final design. During this period,

---

Project: *Les Abouts House, Saint-Edmond-de-Grantham, Quebec, Canada*
Architect: *Atelier Pierre Thibault—Pierre Thibault, principal; Charles Ferland, André Limoges, project team*
Structural engineer: *Gaétan Samson*
General contractor: *Réjean Desilets*

PHOTOGRAPHY: © ALAIN LAFOREST



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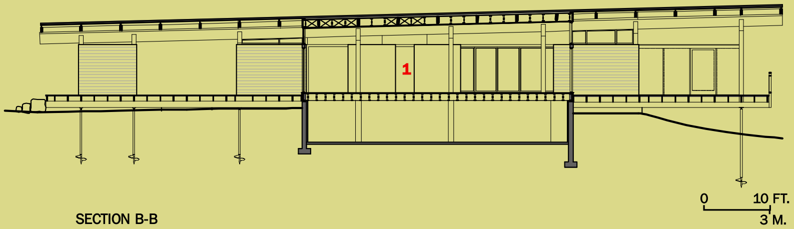
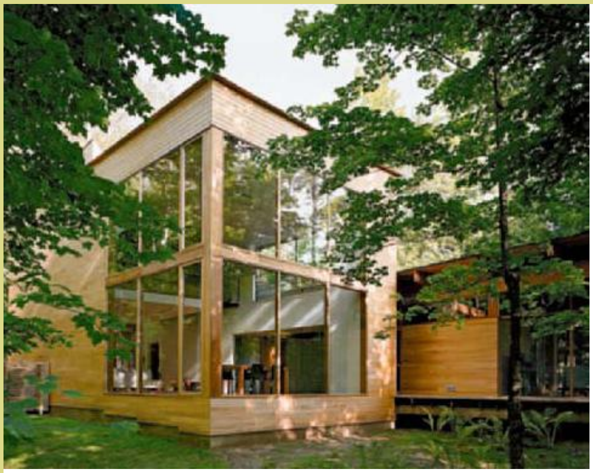
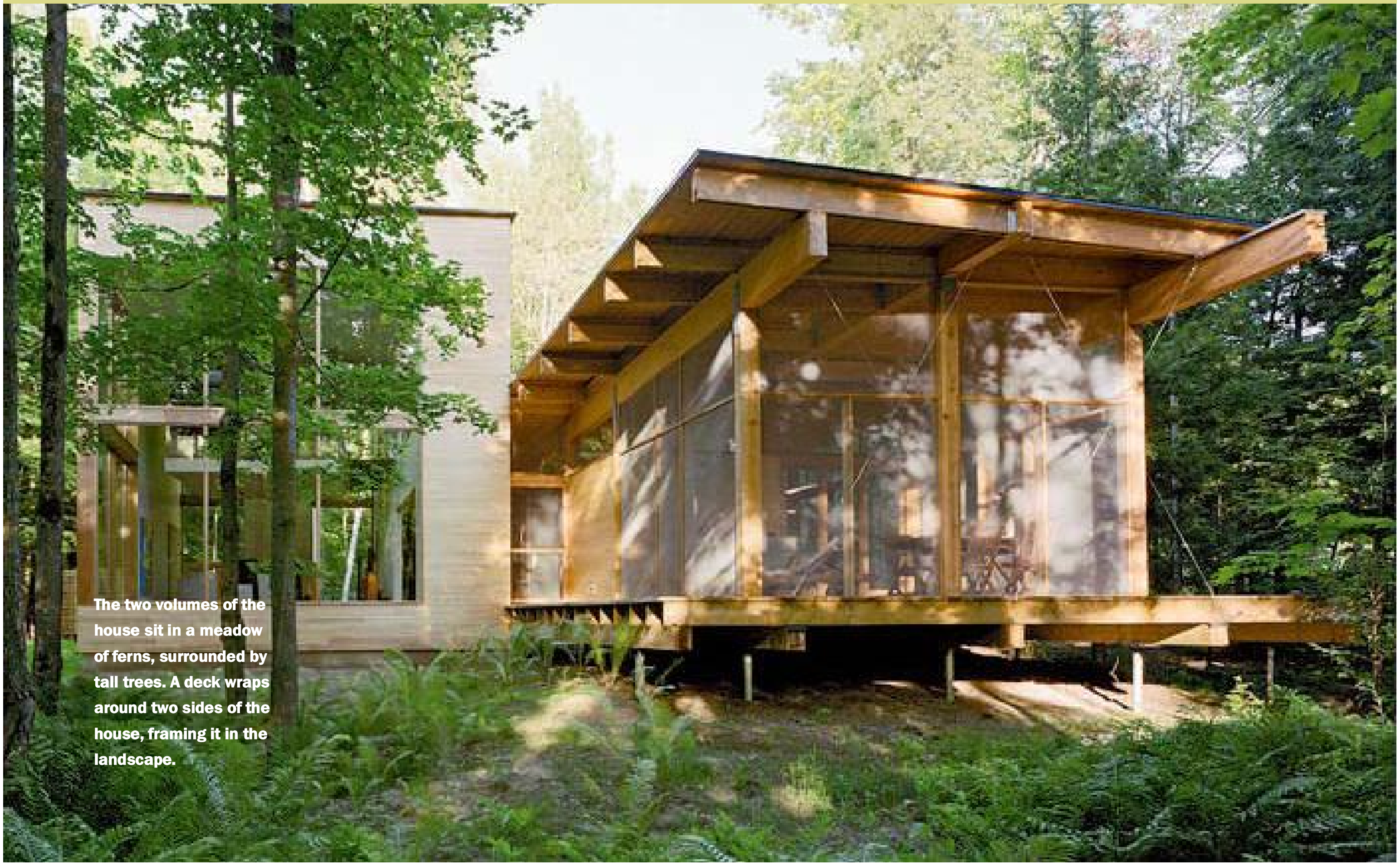


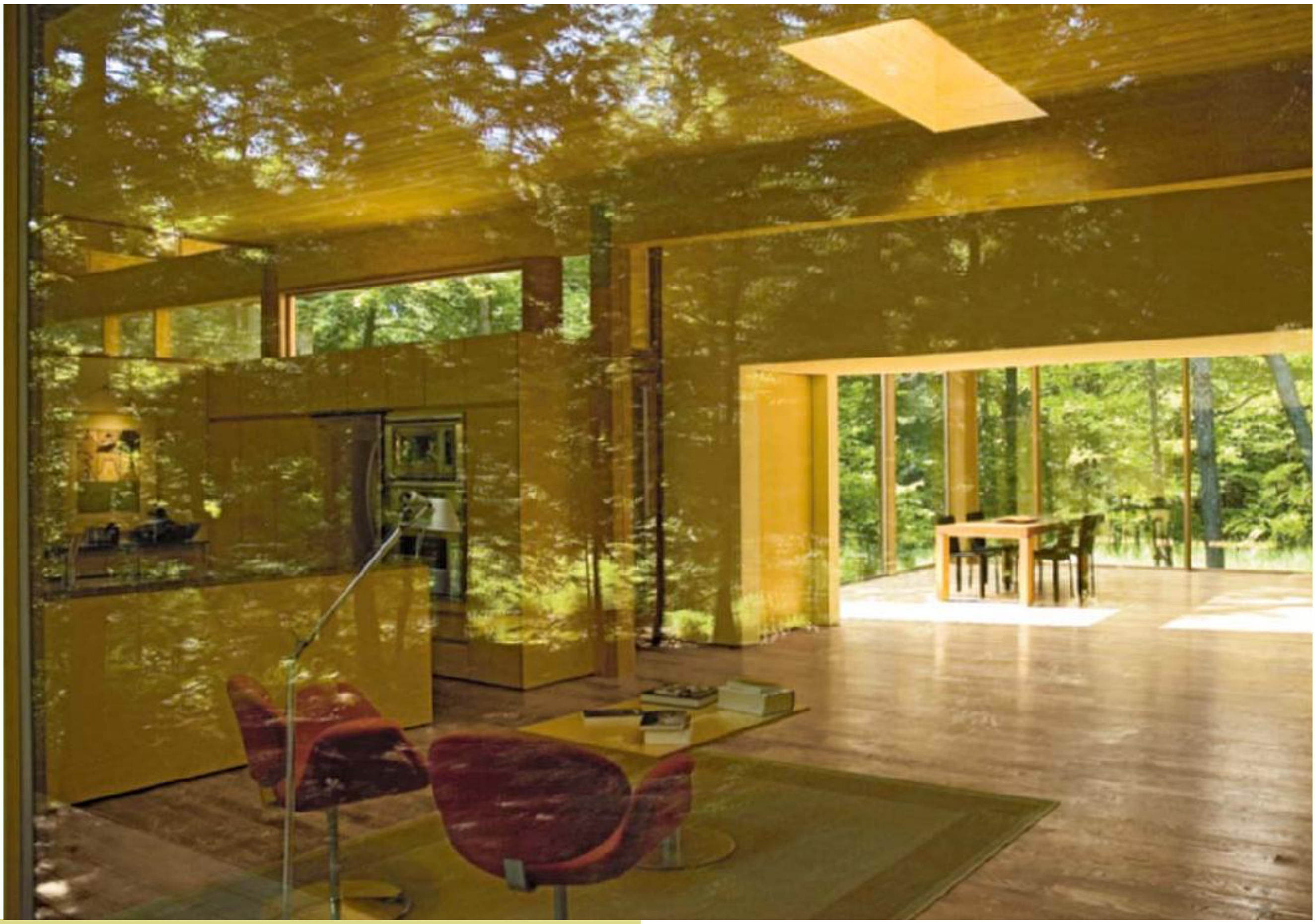
SECTION B-B

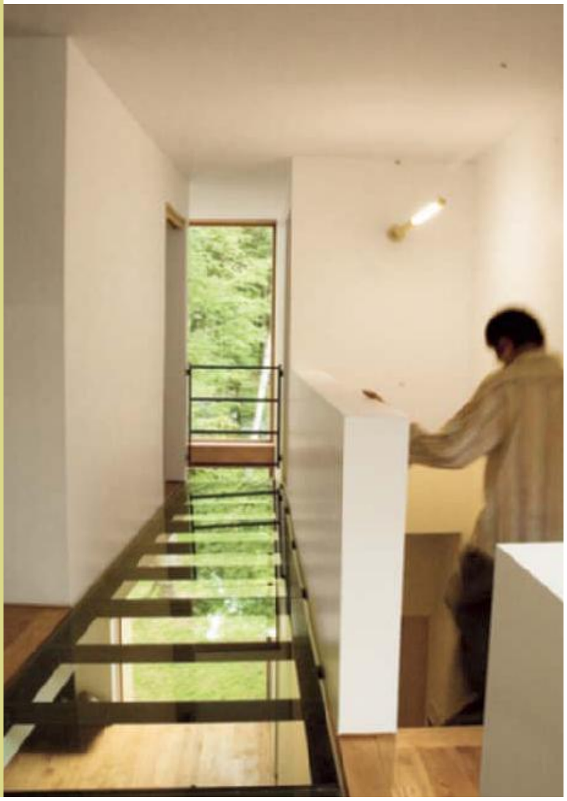
1. *Entrance hall*
2. *Library/office*
3. *Living*
4. *Master bedroom*





The two volumes of the house sit in a meadow of ferns, surrounded by tall trees. A deck wraps around two sides of the house, framing it in the landscape.





The sitting room, dining room, and kitchen merge into one another (above), creating a great party space. Upstairs, a glass-floored corridor enhances the effect of transparency (left).

Thibault visited the site frequently to sketch ideas and understand the setting, its moods changing with the seasons. This deliberative but intuitive design process, allowing him to explore ideas through the medium of sketching, is the architect's usual way of working. (Over the course of his career, he has created more than 10,000 drawings.)

The owners wanted their country home to serve as "an art gallery in the wilderness," says Thibault, to house their collection of contemporary art. In addition, the owners wanted a flexible house that provided "open spaces for gathering with family and friends and a more private part for us," they said. Responding to the flat plane of the river, the architect sculpted a one-story horizontal volume that contains the private areas of the house, including the master bedroom, kitchen, and two baths. Juxtaposed to this, a vertical volume echoing the mature trees on the site accommodates the living/dining room. A cube-shaped second floor hovers over the living room, suspended from above by steel rods imbedded in its walls. It contains a library/study with two full walls of built-in shelves visible over the dining room, and a guest bedroom and bath beyond it. The living room achieves a sense of intimacy by being tucked underneath this volume. Next to it, the two-story dining room mimes the verticality of the trees outside, its full-height windows allowing the patterns of

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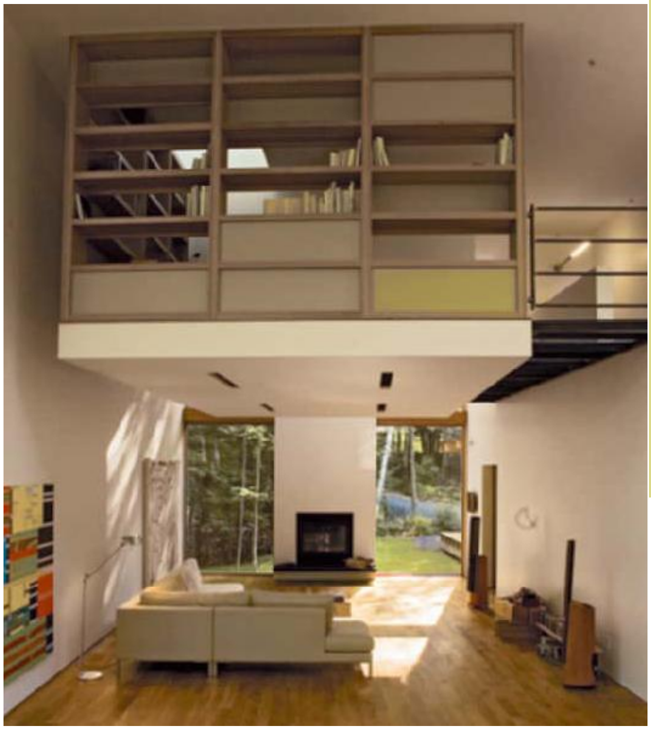
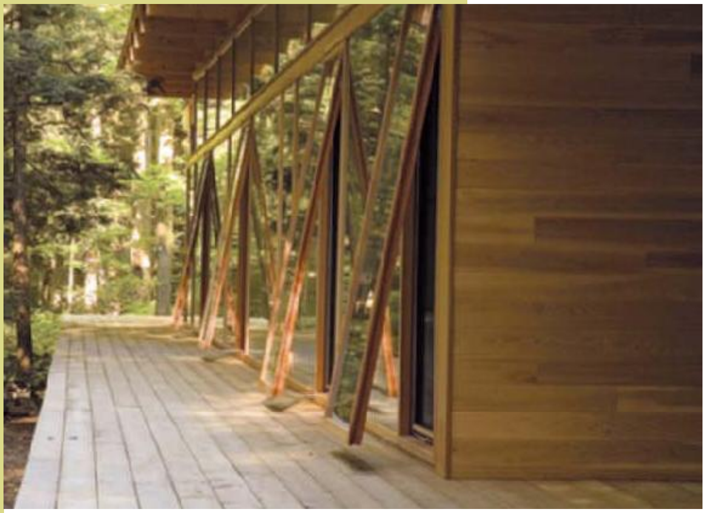
The double-height walls of the dining room (right) contrast with the living room, which is defined by the second-story volume above it (below). Full-height awning windows open from the bottom (below right).

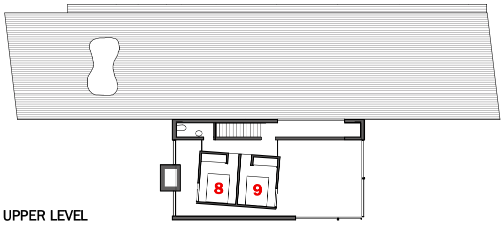


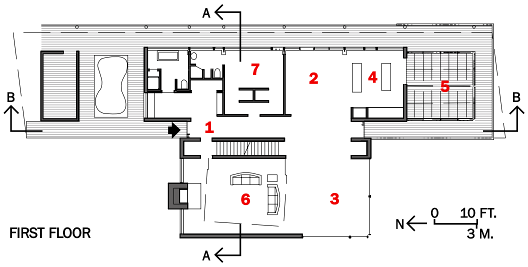


nature to interact with the modern interior.

Thibault uses these two contrasting spatial arrangements to comment on nature and culture. "I wanted to express the directions: a pronounced horizontality that reflects the river's alignment and the dynamics of water flowing from one end of the house to the other, and an extreme verticality that expresses the trees and the thick layer of vegetation that isolate the house from civilization."

A large, gray pine veranda wraps around two sides of the house—the east-facing entry side, and the 100-foot-long south-facing side, with a screened-in porch at the west end, just behind the kitchen. Thibault kept the wide expanse of the deck unadorned, except for an opening that allows one small tree to grow from underneath. Seen from the perspective of the surrounding woods, the pavilionlike volume of the house, extended by the deck, floats between the floor line resting in the ferns and the roofline in the trees. "By moving structural elements inside, we were able to erect a free and extremely light curtain wall, accentuating the sensation of floating and the panoramic framing of the landscape," explains Thibault—an ingenious deviation from the A-frame shape of the traditional Quebec chalet. ■





1. *Entrance hall*
2. *Sitting room*
3. *Dining*
4. *Kitchen*
5. *Screened porch*
6. *Living*
7. *Master bedroom*
8. *Guest bedroom*
9. *Library/office*

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Roof: *Soprema*

Wooden windows and doors: *Michel Légaré*

Cabinets: *Innovaplan*

Lighting: *Compagnie d'éclairage Union*

Armchairs: *Pierre Paulin/ Avant-scène*

Dining set: *Molteni*

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Kitchen & Bath Portfolio

Whether they **optimized a challenging footprint** or had plenty of elbow room to spare, the design teams behind this year's Portfolio were universally successful in increasing **the presence of light and transparency** in these kitchens and baths for a range of clientele. *Rita Catinella Orrell*

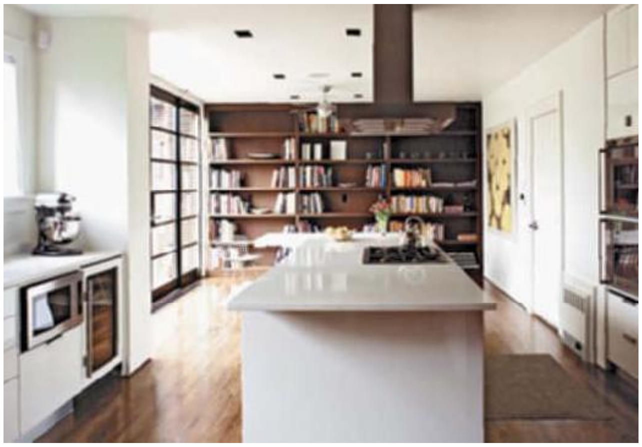
A kitchen and master bath break down boundaries in a 1930s New Jersey home

Elizabeth and Mordechai Kubany's house in Maplewood, New Jersey, was built in the 1930s, and like many homes in that area, it was closed off to the outdoors. Markus Dochantschi, principal of studioMDA, knew the Kubanys socially (Elizabeth works in public relations for architects, and is a former RECORD editor) and noticed the design flaw at a barbecue in the couple's backyard. "The house had absolutely no connection to the outside," Dochantschi said, "and that becomes most apparent when you entertain outside." So when he was hired to add a new kitchen and master suite to the house, Dochantschi decided not just to give the couple and their two children a new kitchen, but "a connector to the outside world."

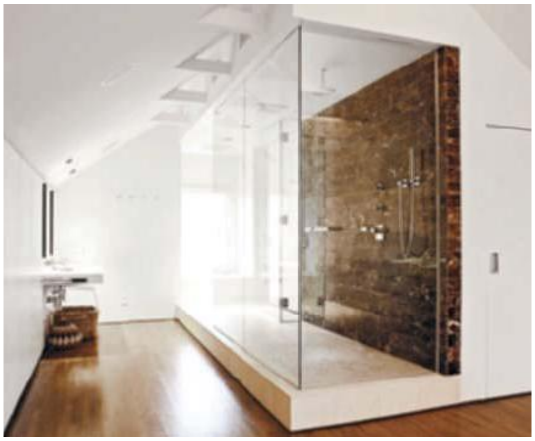
The new kitchen, a starkly Modern wood-and-glass addition to the traditional brick exterior of the original house, juts into the backyard and brings light and views of nature into the informal dining area. Because the clients keep kosher, studioMDA looked at usage diagrams for the kitchen to determine where to put two sinks and two countertops. What the diagrams showed, according to Dochantschi, was "that having a kosher kitchen is really how a kitchen should be able to function, regardless." The firm divided the room between a clinically white kitchen space at one end and the dining area next to the glass doors in the extension. Dochantschi chose to set bookshelves into the wall in the dining area to lend it a more domestic feel.

The equally Modern new master suite is separated from the kitchen by almost the entire bulk of the original house in what was previously an unfinished attic. It is just as open as the kitchen, but much less public. In fact, there is no separation at all between the sleeping area and the master bath. Dochantschi says that the shower sits "brazenly" in the middle of the room.

Though physically separated, the two rooms are connected by aesthetics—both contrast sleek white surfaces with earthier dark browns—and they're connected, too, by the way their uses have changed. "When these houses were built, priorities were not given to kitchens or bathrooms or master bedrooms," Dochantschi adds. "Today, the kitchen has been discovered as having a completely different function in family life." *Kevin Lerner*

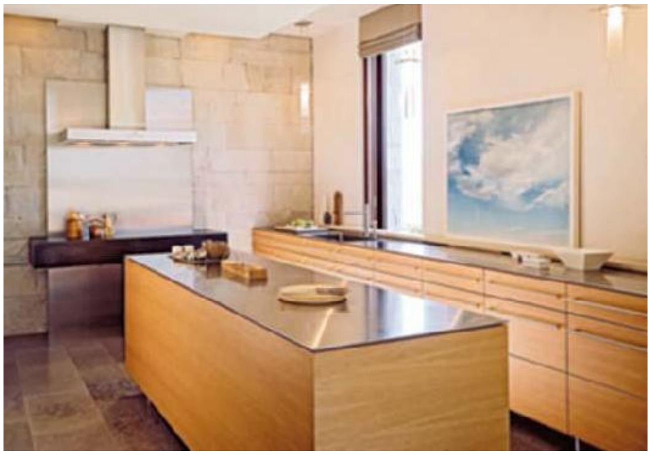


The kitchen addition (above) juts into the backyard and brings light into the informal dining area. The master suite (below two) was built into an unfinished attic space, and features a glass-enclosed shower situated "brazenly" in the middle of the room.

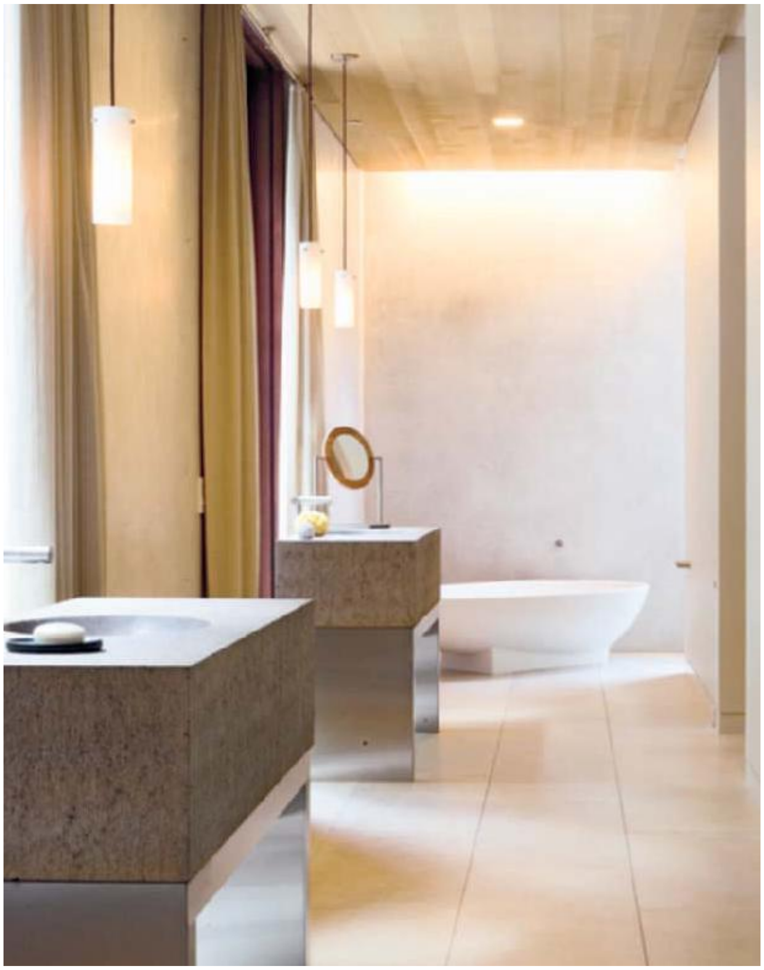


Architect: *studioMDA*
General contractor: *4 Star Construction*
Sources: *Kitchen: Dornbracht (faucets); Bliss Nor-Am (windows, doors); Alkco, Modular (lighting); Gaggenau (cook top, convection ovens, exhaust hood); Bosch (microwave, dishwasher); Sub-Zero (fridges); Bath: Duravit (toilet); Hansgrohe (shower); Sugetsune, E.R. Butler (hardware)*

ÅPHOTOGRAPHY: COURTESY STUDIOMDA/HAGEN STIER



Limestone and white oak warm up the formal, geometric kitchen (above). The Italian limestone floor recalls a nearby hillside (below).



A monastic kitchen and bath draw from the Northern California landscape

Every year, tilling removes local basalt and softens the soil in the vineyards of Sonoma County, California, to maximize the coming growing season's grape yield. This annual ritual informs aidlin darling design's scheme for a residence at the base of Mount Sonoma, and of the modern, yet monastic, kitchen and bathrooms within.

Because the basalt forms many of the low walls that creep throughout the 60-acre working cabernet vineyard surrounding the house (see page 82), "We explored the idea of tactile mapping, using materials as a way of codifying spaces and one's relationship to the ground," says David Darling, AIA, a partner in the firm with Joshua Aidlin, AIA.

In that vein, the kitchen terminates in a sandstone wall, and Portuguese limestone covers its floor. White oak cabinets with stainless-steel counters stand on cylindrical legs to give the impression of freestanding furniture. Moreover, the division of the kitchen into formal and service zones harks back to old English estates and French hotels: Whereas an adjacent scullery includes two dishwashers, an appliance garage, and prep spaces, the formal kitchen features party-ready geometries, artwork instead of upper cabinets, and views to the vineyard and the valley beyond.

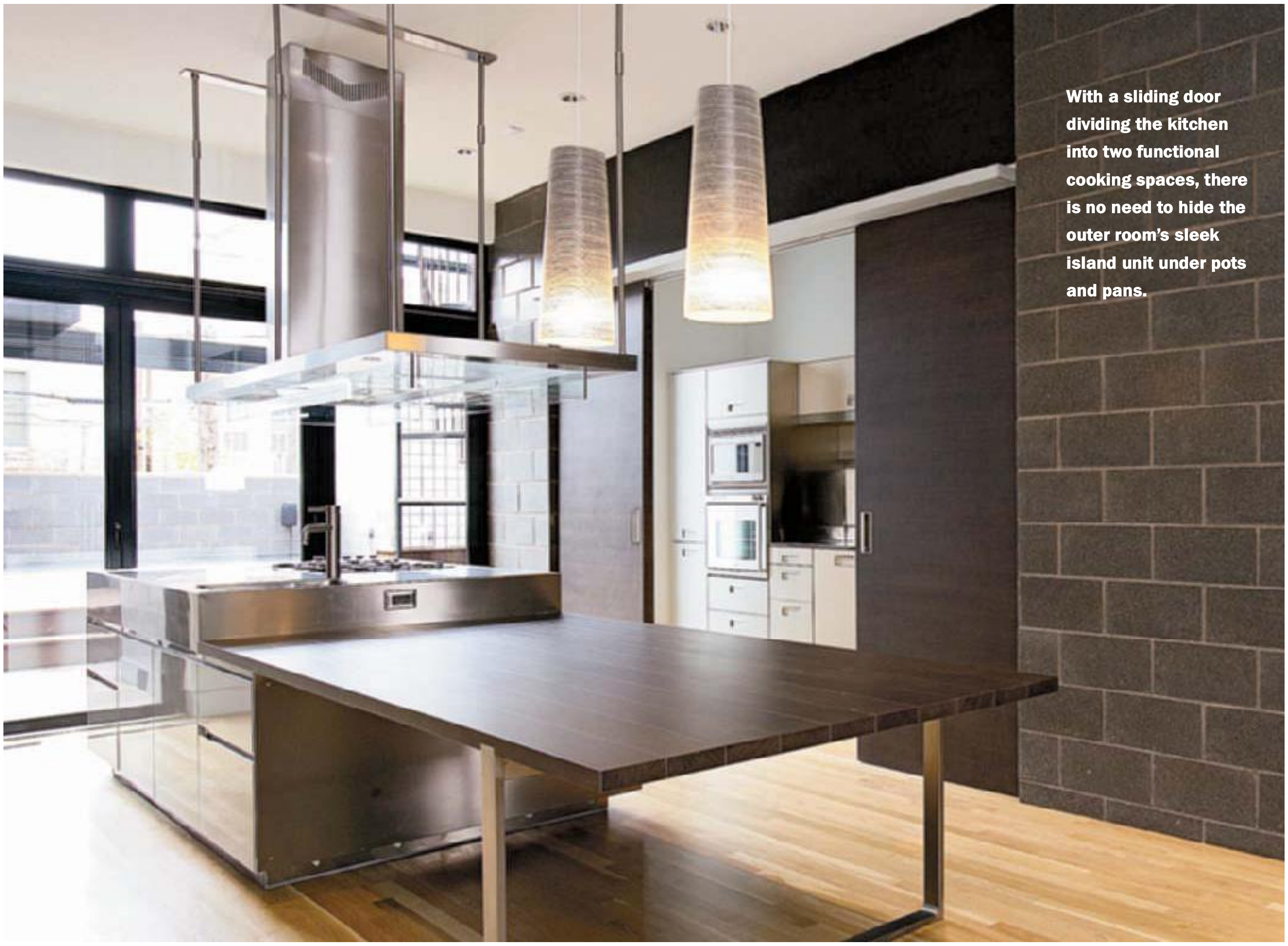
The formal kitchen area includes hidden opportunities for a more workaday treatment, too. Sections of a 4-inch-deep limestone backsplash flip up to reveal electrical outlets. The kitchen island houses a concealed oven and oak-clad warming drawers. And along the stone wall, a blue, T-shaped metal door slides open for cooktop access.

The architects' tactile mapping technique yielded more stone for the master bath, which opens to a courtyard sculpture garden. The Italian limestone floor reminds the clients of the nearby hillside, and the whitewashed cedar ceiling is a continuation from their master bedroom. Here, too, the wash basins are treated like furniture, with tremendous Chinese granite slabs, reclaimed from buildings in the Yangtze River Valley, fabricated into lavatories and mounted on stainless-steel bases.

The bathroom's two basins are placed widely apart in the corridor-like room, which culminates in a sculptural Agape tub bathed in daylight from a nearby window. This procession through the space, punctuated by different tasks and moments of light and dark, transforms the necessary task of cleaning into an experience of romance and introspection.
David Sokol

Architect: *aidlin darling design*
General contractor: *Cello and Maudru Construction*
Sources: *Kitchen: Sub-Zero (fridge, freezer); U-Line (wine chiller); Gaggenau (cooktop, ovens, vent hood, dishwasher); Thermador (microwave, warming drawers); Franke (garbage disposal, kitchen faucet); Sand Studios, Bone Simple, Lucifer (lighting); Berlin Food Company (countertops); Zeluck (windows, doors); Bath: Lefroy Brooks (faucet, tub filler); Agape (tub); Zeluck (doors, windows); FSB (hardware); Kurt Versen (recessed downlights); Rhodes Architectural Stone (stone basin)*

PHOTOGRAPHY: © JOHN SUTTON



With a sliding door dividing the kitchen into two functional cooking spaces, there is no need to hide the outer room's sleek island unit under pots and pans.

A divided kitchen space in Chicago keeps the mess hidden behind closed doors

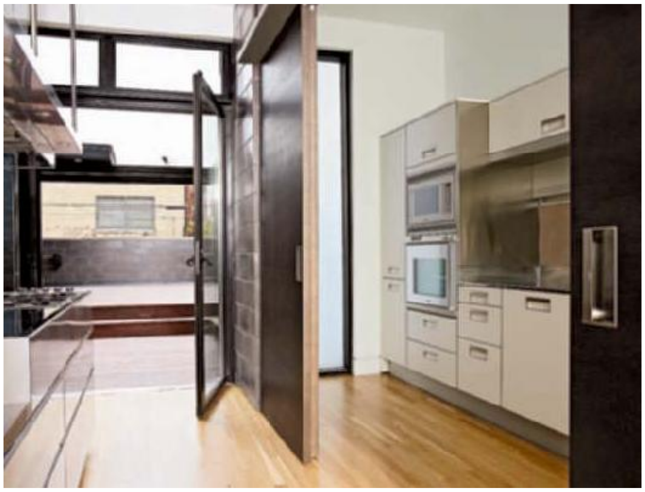
When a Chicago housing developer approached Studio Dwell Architects to design a home in the Bucktown neighborhood for himself—rather than a spec house—the firm knew that it would be dealing with a client who knew what he wanted.

Mark Peters, AIA, the principal architect, said that the client enjoyed the clean lines of Modern architecture, "but that wasn't necessarily how they live, keeping everything nice and clean." This presented a particular problem in the kitchen, a room notorious for collecting decidedly non-Miesian clutter, such as appliances or dish towels.

Studio Dwell's solution was to divide the kitchen into two spaces. "We created this area," Peters said, "where you can sort of enclose part of the kitchen with sliding doors that you can close off if you have a sink full of dishes." With the doors closed, a wide table-height wooden counter and an island with a sink and a stovetop are still open to the house, but most of the client's favored Arclinea appliances are hidden.

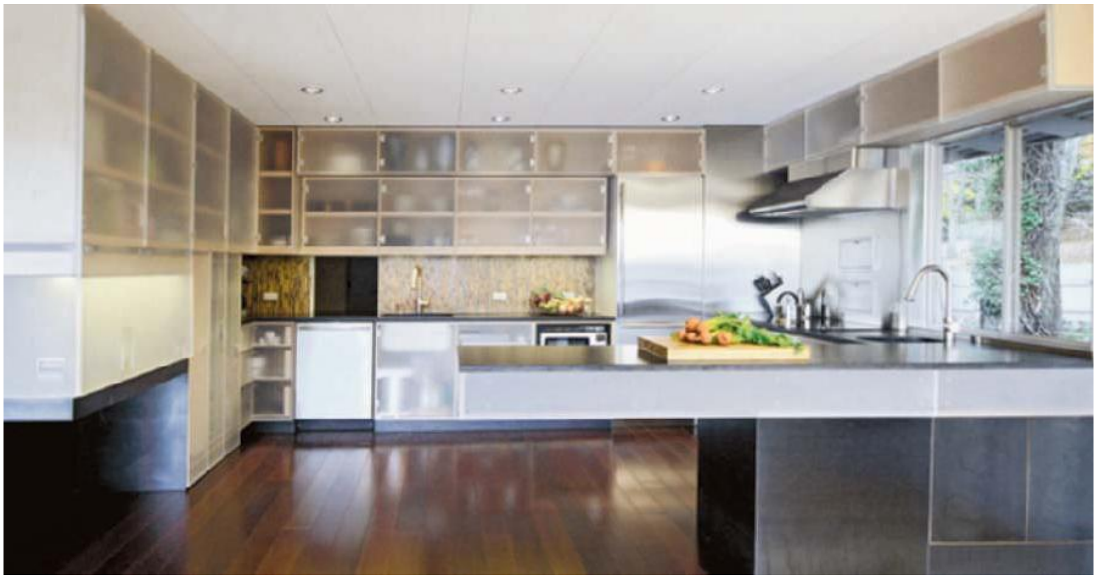
Studio Dwell also had to deal with a lot that was only 24 feet wide, making natural light a precious commodity. To counteract this, the firm created an atrium in the center of the house that allowed natural light to reach the kitchen from both ends. One end of the second-floor kitchen also opens up onto a roof deck above the house's garage, one way the architects attempted to bring the outside in. Another was the dark gray groundface block that forms two of the kitchen's walls, and also the exterior.

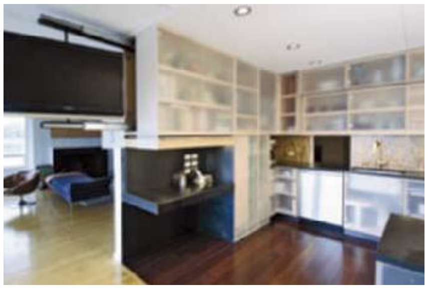
Peters says that he has been to the client's house and has seen the sliding doors "work perfectly." He has been to parties, he says, where caterers operate behind the doors, but it works just as well on normal nights, too. "I've been there on weeknights, where it's a pretty messy kitchen," he said, "and then you just close off the doors, and you've got a clean place to eat." *K.L.*



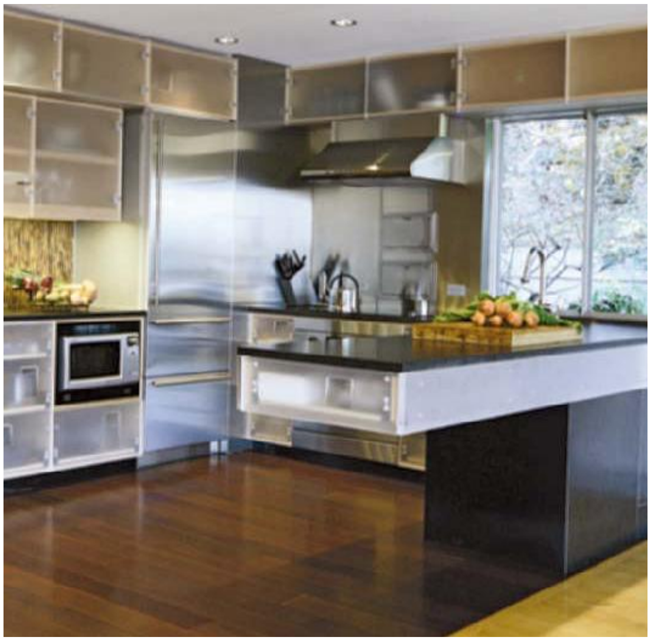
Architect: *Studio Dwell Architects*
Sources: *Miele (dishwasher, range/oven); Whirlpool (washer, dryer, microwave); Sub-Zero (fridge); Dornbracht (faucets, fittings); Best (range hood); Franke (sinks); Arclinea (cabinetry)*

PHOTOGRAPHY: © MARTY PETERS





Acrylic cabinets echo the openness of the home—which is fully exposed on two sides. A flat-screen television (right) slides into a nook built behind the cabinets and rotates between the kitchen and living room.



Translucent cabinets both reveal and conceal

Bogue Trondowski was hired to reformat the 165 square feet of kitchen space for this Darien, Connecticut, home into a more accessible room that would feel of one piece with the free-flowing living and dining areas. Featured in *Architectural Digest* in the 1960s, the house was built to reflect a Japanese influence. It juts out over a lake where the owners keep a boat; often their dock serves as an entrance via the outdoor deck.

In an effort to "reinterpret the landscape in the kitchen," Trondowski says he continued themes already at work in the house and in nature. A workspace in the form of a peninsula mimics the actual peninsula the house sits on; its countertop cantilevers much as the house cantilevers over the water. Granite countertops and a backsplash made with 3form material echo the earthy materials found outdoors.

The translucent, acrylic material used for the cabinet doors calls to mind several of the house's tactics to connect with the outdoors. The house is fully exposed in two directions through large windows and glass doors; at night, it resembles a lantern or beacon, while during the day its permeability gives a sense of openness. Much like these exposures, the cabinets keep food and dishes enclosed but allow some visual access to their contents.

The custom cabinets also provided Trondowski with an opportunity to experiment with materials and technique. "Take a close look at the cabinets; each one has a different handle that was handmade," he says. Each placed in a unique position, the acrylic handles add a rhythm and texture to the whole composition, not unlike the way houses dot the nearby shores. Trondowski also designed a custom cabinet that holds a television when not in use. The television can slide out of its nook and be rotated to view programs either in the kitchen or in the living room. *Diana Lind*

Architect: *Bogue Trondowski Architect*
General Contractor: *Mariusz Kupiec*
Sources: *Sub-Zero, Summit (fridges); Bosch (dishwasher, oven, cooktop); Sharp (microwave); Kindred (sinks); Hansgrohe (faucets); Blum, Hafele (cabinet hardware); Alkco, Halo (lighting); Lutron (lighting controls, outlets); Toshiba (television)*

PHOTOGRAPHY: © ZITRON DESIGN STUDIO

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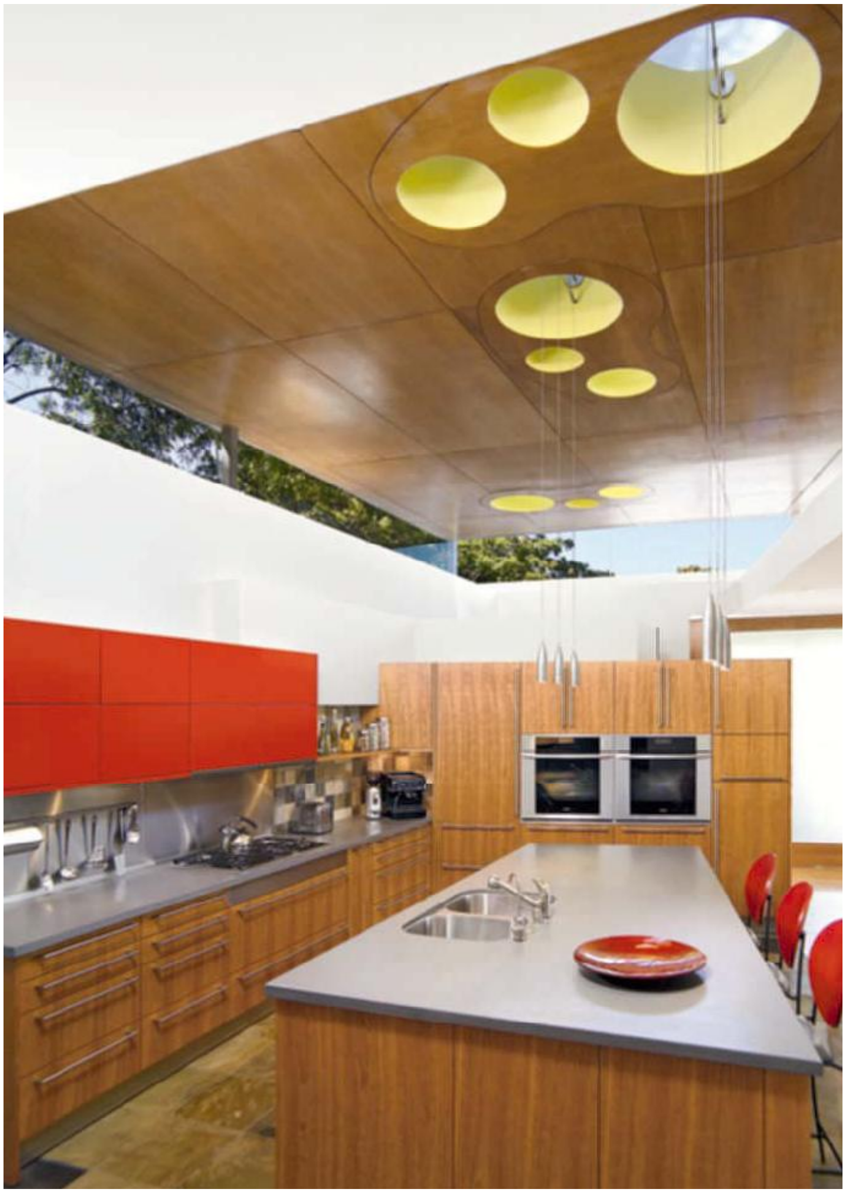


To bring light into a centrally located kitchen, the architect raised the ceiling and punctured it with randomly placed round skylights. Furniturelike cabinetry ties the space to the rest of the home.

Puncturing a kitchen ceiling to create a “constellation of light”

This house in Encino, California, sits dramatically above a canyon overlooking the San Fernando Valley. Light pours into its family room, living room, and bedrooms, but until now, the kitchen didn’t see any of this action. The cramped space was located in the center of the house, with little direct connection to the outside.

In response, L.A.-based Abramson Teiger Architects, who recently renovated the entire residence, changed the kitchen into a lofty, bright space that feels connected not only to the rest of the interior, but to the splendid outdoor scenery nearby.

The firm raised the kitchen ceiling from 8' to 14', creating an overhead plane that appears to hover above narrow clerestory windows that wrap around the top of the space. The architects also installed randomly placed round skylights (colored lime green for emphasis) which allow light to enter at discreet points, creating what firm principal Trevor Abramson, AIA, calls “a constellation of light.” The architects also demolished the kitchen’s east-facing wall and door, completely opening the space to the adjacent family room, with its large windows and abundant access to light and views.

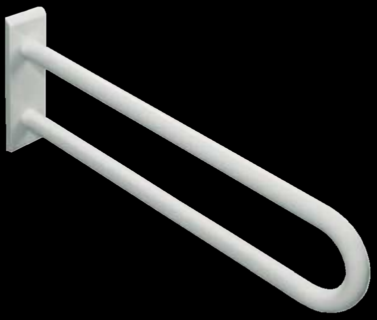
The ceiling, as well as most cabinets, the new central island, and the refrigerator, are clad in cherry wood, which warms the space and makes it feel more intimate, despite its height. The elegant cladding also further connects the kitchen visually to the rest of the house, as do the low-profile stove and the oven hood built into the cabinets, which help the area feel more like a part of the family room than a separate space. “The kitchen becomes part of the furniture,” says Abramson.

Elsewhere, the kitchen is accented with an elegant stainless-steel sink backsplash, hanging pendant light fixtures, red lacquer cabinets, and a slate tile floor.
Sam Lubell

Architect: *Abramson Teiger Architects*
General contractor: *AJ Engineering & Construction*
Sources: *Gaggenau (oven); Wolf (cooktop); Miele (dishwasher); Sub-Zero (fridge, freezer, wine fridge); Franke (sink, faucet); Ise (disposal); Ceasar Stone (countertop surfaces); Bulthaup Kitchens (cabinets)*

PHOTOGRAPHY: © DAVID LENA PHOTOGRAPHY

The details that inspired “it’s all in the details.”



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Section 10 80 XX:
Requirements

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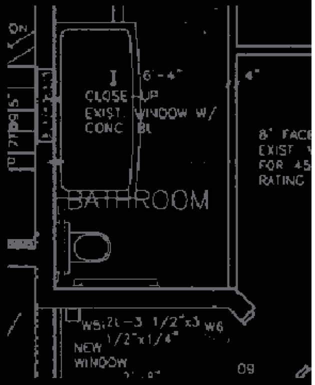
- ☒ Rust Resistant
- ☒ ADA Compliant
- ☒ Functional

Section 10 80 XY:
Shop Drawing



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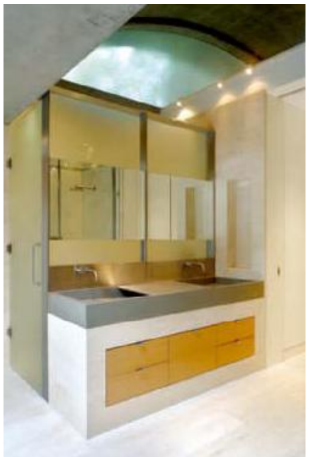
A memory of Pompeii captured in concrete

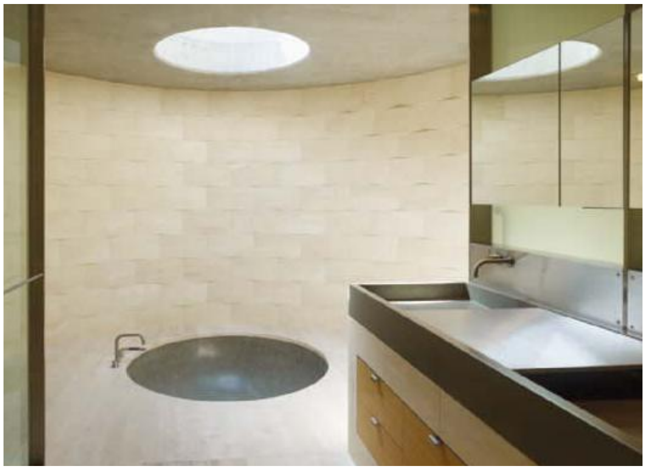
Some months after Ogrydziak/Prillinger Architects completed a renovation of this California house, principal Luke Ogrydziak, AIA, was reviewing photos of a trip to Italy. In Pompeii, he had come across a bathroom with a sunken tub beneath an oculus, and he realized how it had subconsciously influenced this sensuous master bath.

The space had once served as a closet, located at one end of the house—its rounded walls emulating in plan the building's barrel-vaulted ceiling. Given the space's existing skylight, Ogrydziak knew a tub should sit underneath it, but the solution of a sunken, circular tub was not obvious. "We tried a lot of object tubs that never seemed right. In the end, we tried to do something that was more about the space than the object," Ogrydziak says. Located off to the side, a small banquette provides space for a sink, with accents of stainless steel and white oak.

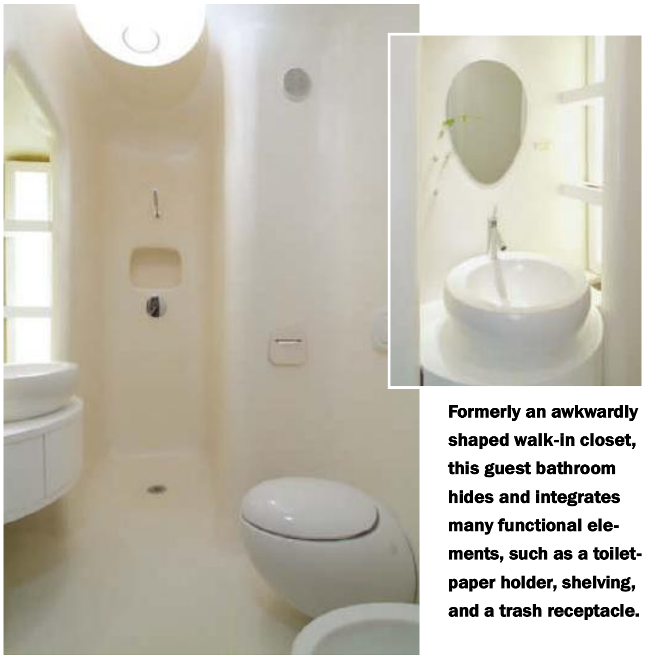
For the renovation, Ogrydziak/Prillinger sandblasted the house's old concrete and installed new plumbing. They clad the bathroom in travertine, placing basket-weave tiles on the wall and slab on the floor. "While the building has a contemporary language, we were really interested in exploring weight and heaviness, and we wanted to use classic, spare materials," he adds. "Travertine, concrete, and stainless steel are not trendy." *D.L.*

Architect: *Ogrydziak/Prillinger Architects*
General Contractor: *Ryan Associates*
Sources: *Vola (fittings); Mina (rain shower); Kohler (steam shower); Concreteworks (custom concrete trough sink, sunken tub); 3D Studios (stainless-steel frameworks); Supreme Glass (glazing); Detail A (wood casework); Translite Sonoma (low-voltage track lighting); Lutron (lighting controls, outlets)*





The bathroom's rounded walls echo the barrel-vaulted ceiling of the house (seen left, above double sink). After a long search, the team decided a sunken tub would work best under the oculus (below).



Formerly an awkwardly shaped walk-in closet, this guest bathroom hides and integrates many functional elements, such as a toilet-paper holder, shelving, and a trash receptacle.

Turning a walk-in closet into a "spacey" bath

For a ground-floor interior renovation in Rome's historic Trastevere neighborhood, architect Carola Vannini created a modern counterpoint to the building's 17th-century exterior. The project's guest bathroom—a curvy, resin-coated sliver that seems perfectly suited to HAL 9000's spaceship—epitomizes the contrast.

The 1,291-square-foot home is divided into "day" and "night" zones. Black and red bathrooms, Vannini says, reflect the personalities of the couple who live there, while a white guest bathroom represents "the best expression of my design."

The bathroom, measuring only 43" square, was originally an awkwardly shaped walk-in closet. "I had to utilize the small size and angles, the worst characteristics, and transform them into a strength," Vannini says. To do so, she smoothed all the corners of the bathroom and covered them in a three-layered nontoxic resin. The result "denies any visual reference point" to lend the appearance of a much larger space. In order to enhance the size further, Vannini also kept the new bathroom clutter-free: The toilet-paper holder is hidden next to the lavatory; the cantilevered vanity beneath the washbasin includes a trash receptacle; and shelving is integrated in the walls enveloping the basin. While plumbing fixtures do project into the room, their bubble shapes capture the spirit of the organic container. *D.S.*

Architect: *Carola Vannini Architecture*
General Contractor: *Arcangeli Alessandro*
Sources: *Tiseo Woodworking (furniture); Catalano (washbasin, toilet, bidet); Fantini (shower faucet); Sikkens (white resin)*

PHOTOGRAPHY: COURTESY CAROLA VANNINI ARCHITECTURE/FILIPPO VINARDI (BOTTOM TWO); TIM GRIFFITH (TOP TWO)

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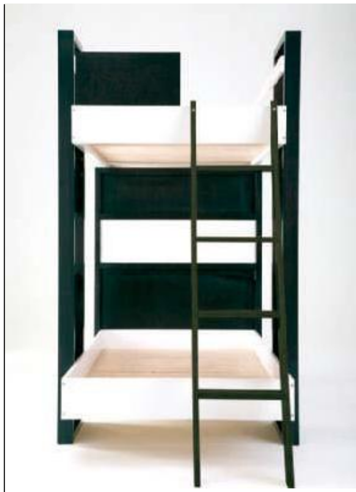
Residential Products

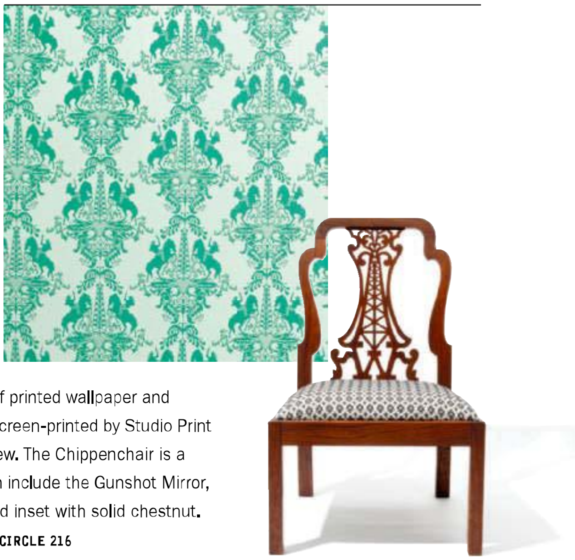
Brooklyn Designs

Standouts at the show, now in its fifth year, pushed the limits of traditional categories such as children's furniture and wallpaper. *Diana Lind*



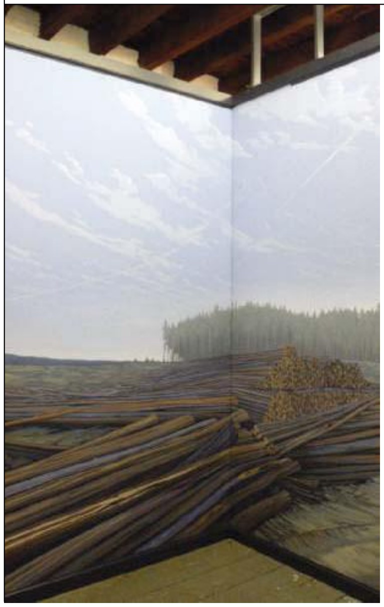
◄ For the Modernists of tomorrow

Founded by Jenny Argie and Andrew Thorton, Argington is a new furniture company dedicated to pairing young children with high design. Combining backgrounds in fine art and architecture, the couple was inspired to create a line of Modern children's furniture after the birth of their first child. Argington creates sustainable pieces made from wood and fabrics that are nontoxic and ecofriendly, yet durable. Pieces accommodate all ages, from a bunk bed for young siblings to a high chair even a mom can sit on. Argington, Brooklyn, N.Y. www.argington.com **CIRCLE 215**



► Oils well that ends well

Born in Des Moines, Iowa, from a long line of German carpenters, Paul Loebach combines his past with present events in his debut line of furniture. He juxtaposes the oil rig, symbol of modern commerce and capitalism, with the civility of printed wallpaper and Chippendale chairs. The Yee-Ha Wallpaper is hand screen-printed by Studio Print Works and designed in collaboration with Syrette Lew. The Chippenchair is a limited-edition work. Other pieces from his collection include the Gunshot Mirror, made of mirrored glass that is shot by a .22 rifle and inset with solid chestnut. Paul Loebach, Brooklyn, N.Y. www.paulloebach.com **CIRCLE 216**



◄ Twin visions

While most exhibitors at the show are sensitive to the ecological damage that producing new furniture creates, Faust Decorative Arts' 9' x 20' mural depicting a deforested landscape (left) brought the message home. The mural illustrates the apocalyptic feeling floating through much of the world nowadays and reiterates the company's ironic nod to the utopian scenes customarily painted on murals. Owned by twin brothers, Faust creates custom pieces according to the vision of its clients. Faust Decorative Arts, Brooklyn, N.Y. www.f2da.com **CIRCLE 217**

For more information, circle item numbers on Reader Service Card or go to **architecturalrecord.com/products/**.

► Doing it for themselves

After having spent a decade fabricating custom pieces for museums, artists, and architects, Zach Hadlock, along with a small group of workers, established Platform Furniture and Fabrication. With this enterprise, Hadlock extends his talents to spare interior forms that look like timeless classics. The collection of furniture includes china cabinets, credenzas, and bookcases as well as custom pieces, all in a far-ranging palette of reclaimed Douglas fir, Honduran mahogany, and aluminum, among other materials. Platform Furniture and Fabrication, Brooklyn, N.Y. www.platformfaf.com **CIRCLE 218**

◄ Many layers of design

4-Pli is a four-person architecture and fabrication firm whose work includes installations in local wine stores and restaurants. Their debut at Brooklyn Designs included an array of furniture for domestic (crib, top) and institutional (conference table, left) needs. The Puzzle Conference Table is composed of seven individual segments that link together to make a large meeting table. The segments are easily separated for use as autonomous desks, and roller-blade wheels on each leg make the sections mobile. 4-pli, Brooklyn, N.Y. www.4-pli.com **CIRCLE 219**

▼ The sustainable borough

Founded by Sef Pinney as an outlet for 3D, graphic, and fiber-based creative endeavors, Elucidesign set up its product design studio/shop in Williamsburg in 2005. The studio seeks to develop furniture prototypes that prioritize functionality, ergonomics, and materials while not sacrificing sustainability. To meet those needs, the firm uses materials with low embodied energy; water-based, nontoxic finishes; and FSC or domestic woods from managed forests. Its Redpoint collection, which includes three tables, a desk, and a cabinet, is also portable. Elucidesign, Brooklyn, N.Y. www.elucidesign.com **CIRCLE 220**

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The AIA Housing and HUD Awards Programs Honor 22 Projects

AIA HOUSING COMMITTEE AWARD: ONE- AND TWO-FAMILY CUSTOM RESIDENCES

Project: *1532 House*
Location: *San Francisco*
Architect: *Fougeron Architecture*

Inserted onto a sloping, 25-foot-wide lot in San Francisco, two distinct volumes compose the 3,200-square-foot 1532 House. A garage, studio, and terrace form the street-side volume. Separated by a courtyard, the rear volume houses bedrooms and living spaces. The jury appreciated the house's subtlety and resourcefulness: "The house has a street presence that doesn't overpower. The plazas, balconies, and courtyards are very inventive uses of a limited space." Floor-to-ceiling windows, glass floors, and skylights allow light to penetrate deep into all rooms.

Project: *House at the Shawangunks*
Location: *New Paltz, N.Y.*
Architect: *Bohlin Cywinski Jackson*

Nestled in the woods on a steeply sloped site, this house uses simple geometry and materials to complement the pristine beauty of the Shawangunk Ridge on which it sits. A black-stained concrete foundation forms a pedestal under a cubic volume that projects from the hillside. A rectangular volume rises behind the cube, anchoring it to the sloping landscape. The jury praised the house's simple plan and the quality of its detailing, saying, "A secure hand made this happen."

Project: *A Ranch House in the San Juan Mountains*
Location: *Telluride, Colo.*
Architect: *Michael Shepherd Architect, AIA*
Client: *Michael Shepherd and Candida von Braun*

At an elevation of 9,000 feet, in a remote region of Colorado's San Juan Mountain Range, architect Michael Shepherd synthesized Modernism and regional vernacular in a ranch that jury members called "timeless," "serene," and "wonderfully understated." Recycled oak and Douglas fir were used for flooring, doors, and cabinetry. Solar power and propane are the primary energy sources.

PHOTOGRAPHY: © RICHARD BARNES (1532 HOUSE); NIC LEHOUX (HOUSE AT THE SHAWANGUNKS); MICHAEL SHEPHERD, AIA (A RANCH HOUSE IN THE SAN JUAN MOUNTAINS); PETER AARON/ESTO (LOBLOLLY HOUSE); BENJAMIN BENSCHNEIDER (DELTA SHELTER); TIM BIES (TYE RIVER CABIN)

It isn't a great house if it isn't a green house today, so it's no surprise that most of the winning projects in the 2007 AIA Housing Awards embrace sustainability. Many of the buildings engage their natural environments in form as well as function, setting these architects apart by translating environmental issues from a design responsibility into an aesthetic. Other winning buildings are distinguished for their contributions to the human environment. Community revitalization and residences for homeless, sick, and disabled people received exceptional recognition this year. ***Christopher Kieran***

Project: *Loblolly House*
Location: *Taylors Island, Md.*
Architect: *KieranTimberlake Associates*
Client: *Barbara DeGrange*
[RECORD, April 2007, page 140; November 2006, page 185]

Perched by the water, on a barrier island in the Chesapeake Bay, Loblolly House was assembled entirely from off-site-fabricated elements and ready-made components. Stephen Kieran, FAIA, sought to fuse the natural elements of the island to architectural form. The surrounding Loblolly pines and tall grasses, the sea, the horizon, the sky, and the western sun define the place of the house and are woven into the architecture, which the jury called "remarkable" and "unique." The jury also noted the use of local materials and an innovative plan for disassembly and reuse.

Project: *Delta Shelter*
Location: *Winthrop, Wash.*
Architect: *Olson Sundberg Kundig Allen Architects*
Client: *Michael Friedrich*
[RECORD, April 2006, page 92]

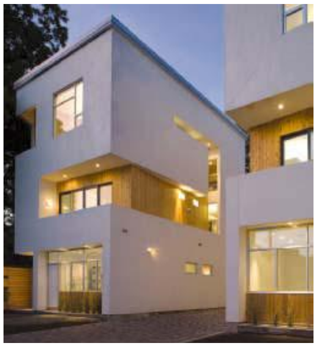
The jury raved about the Delta Shelter, calling it "gorgeous" and "in harmony with the site," perched on stilts above a flood plain in northern Washington. A large wheel—one of Tom Kundig's famous "gizmos"—spins to open and close metal shutters, which protect the house from the harsh climate. Prefabricated metal frame, shutters, and stairs expedited construction-site activity. When open, the shutters reveal a 360-degree view.

Project: *Tye River Cabin*
Location: *Skykomish, Wash.*
Architect: *Olson Sundberg Kundig Allen Architects*
Client: *Jim Dow*

A wooden tent stretched over a platform makes up the Tye River Cabin, whose walls double as swing-out windows, transforming the house into a pavilion where interior and exterior merge. Jury members recognized the romance of the space, commenting, "This project is a simple, elegant solution to having shelter while remaining one with nature. The modest size makes you feel like you're in the forest, with no boundaries." The materials are allowed to weather to reflect the natural tone of the wooded site.

Residential News

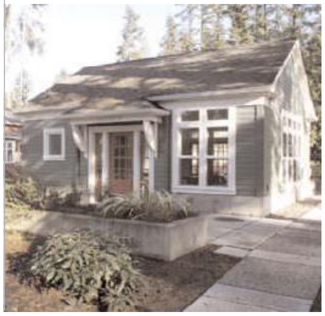
AIA HOUSING COMMITTEE AWARD: ONE- AND TWO-FAMILY PRODUCTION HOMES



Project: *The 505*
Location: *Houston*
Architect: *Collaborative Designworks*
Client: *James Evans, AIA*

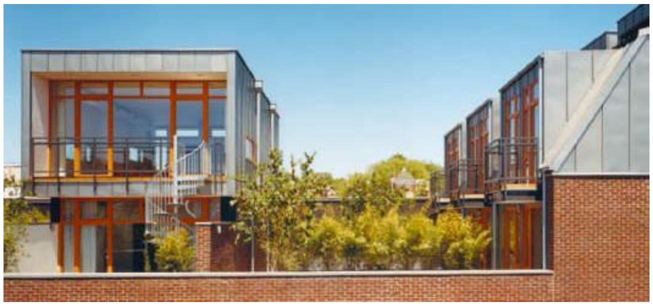
A four-unit housing development in downtown Houston, the 505 maintains an architectural identity while incorporating sustainable design principles and succeeding financially. The jury was impressed by the street frontage, noting, "It respects the character of the neighborhood. Elegant use of materials gives richness to the structure, all within the low budget." The "cleverly planned" units use natural cross ventilation, daylighting, permeable ground coverings, stack-vented rain screens, radiant barrier roofing, recycled and sustainable materials and finishes, tankless water heaters, and high-efficiency appliances and equipment to ameliorate environmental impact.

Project: *Danielson Grove*
Location: *Kirkland, Wash.*
Architect: *Ross Chapin Architects*
Client: *The Cottage Company*



Each home in Danielson Grove sits on a private lot facing a garden courtyard. This pocket neighborhood was developed by Ross Chapin Architects with the Cottage Company to demonstrate the market for detached housing alternatives for small households. The houses are Built Green/Energy Star–certified, and the site's large trees were preserved during construction. "The central courtyard and community building are great organizing features," said one jury member. A commons building for potlucks, family gatherings, and meetings fosters a sense of community.

AIA HOUSING COMMITTEE AWARD: MULTIFAMILY HOUSING

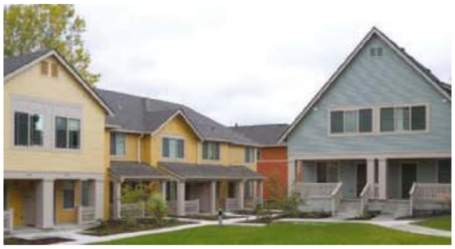


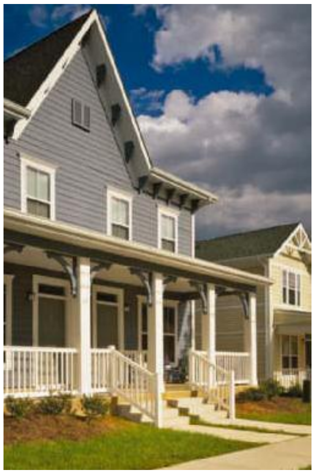
Project: *1247 Wisconsin Avenue*
Location: *Washington, D.C.*
Architect: *McInturff Architects*
Client: *EastBanc*

Restoring two mid-19th-century commercial and residential buildings, Bethesda, Maryland–based McInturff Architects expanded street-level retail space and created six luxury residential units above. The new residences are clad in zinc with Douglas fir windows to distinguish them from the traditional brick base. Each has at least one private outdoor space screened by dense planting to invoke the feeling of a rooftop village floating above the bustling Georgetown shopping street.

Project: *High Point Community*
Location: *Seattle*
Architect: *Mithun*
Client: *Tom Phillips, Seattle Housing Authority*

A New Urbanist site concept for the HUD HOPE VI program replaces 716 post–World War II subsidized housing units with 1,600 new residential units on 120 acres. Community involvement in the design process won the project the HUD Award for Community-Informed Design (page 208).



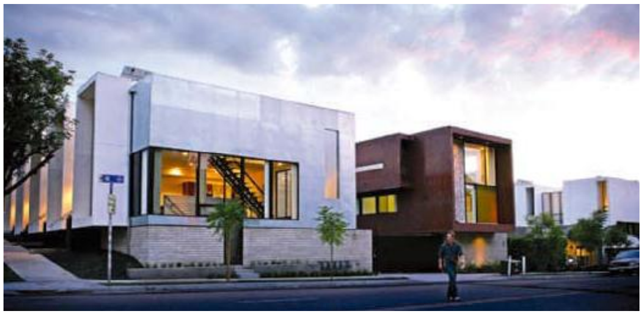


Project: *Bridgeton Hope VI*
Location: *Bridgeton, N.J.*
Architect: *Torti Gallas and Partners*
Client: *The Ingerman Group*

With a 2001 HUD HOPE VI grant, Torti Gallas and Partners took an unconventional approach to neighborhood revitalization. Rather than demolish and replace the existing public housing, the firm decided to restore it as riverside parkland and to knit new housing into the city's historic fabric. An impressed juror remarked, "The project is beautifully detailed and researched. It transforms the neighborhood back to what it was."

PHOTOGRAPHY: © AKER/ZVONKOVIC PHOTOGRAPHY (THE 505); ROSS CHAPIN (DANIELSON GROVE); JULIA HEINE (1247 WISCONSIN AVENUE); DOUG SCOTT (HIGH POINT COMMUNITY); HEDRICH BLESSING (BRIDGETON HOPE VI)

AIA HOUSING COMMITTEE AWARD: MULTIFAMILY HOUSING

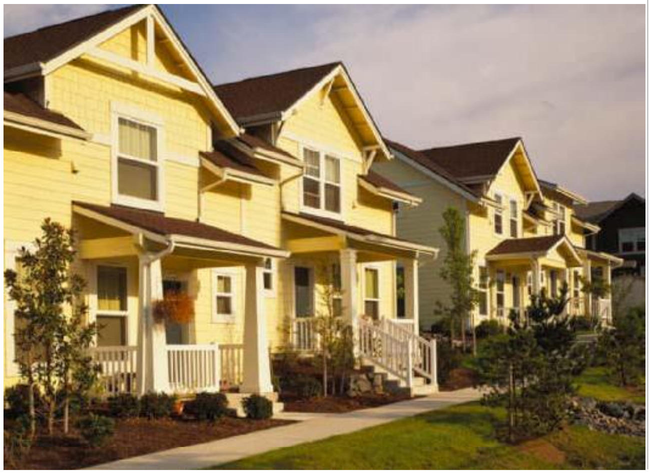


Project: *The Union*
Location: *San Diego*
Architect: *Jonathan Segal, FAIA*
Client: *Jonathan Segal*

Jonathan Segal's adaptive reuse of an old textile manufacturers' union hall in San Diego incorporates two live/work lofts and the architect's own office. Featuring a fully sustainable edifice, each unit generates its own power from roof-mounted photovoltaic panels and is landscaped with drought-tolerant plants. The jury took note that the architect acted also as the developer, owner, contractor, and landscape architect.

Project: *Salishan Neighborhood Revitalization*
Location: *Tacoma, Wash.*
Architect: *Torti Gallas and Partners*
Owner: *Tacoma Housing Authority*

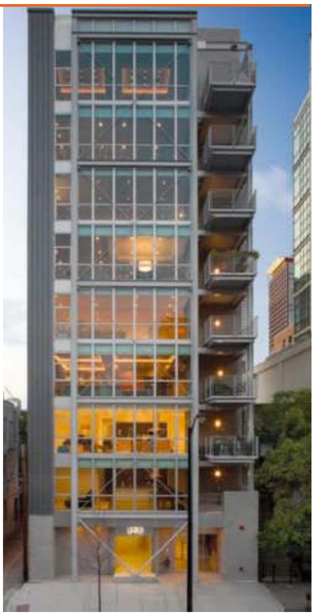
A HOPE VI grant funded Torti Gallas and Partners' revitalization of this Tacoma neighborhood. Previous development mistakes had caused environmental damage to the community's natural resources.

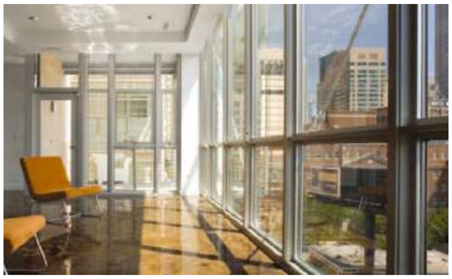


Restoring and protecting Swan Creek was a major initiative in this project, which uses green space to create a connective, pedestrian-friendly neighborhood. The project also won the HUD Award for Community Connection (page 208).

Project: *156 West Superior Condominiums*
Location: *Chicago*
Architect: *The Miller/Hull Partnership*
Client: *Ranquist Development*
[RECORD, May 2007, page 226]

Despite a constrictive 45-by-100-foot site, this nine-story condominium in the River North district of downtown Chicago is beautifully scaled and situated. Cantilevered decks enhance each unit, and a large common roof deck provides views of the Chicago skyline for all residents. Minimalism and an externalized structure echo the economy, efficiency, and order of the Second Chicago School of Architecture.





PHOTOGRAPHY: © PAUL BODY (THE UNION); STEVE HALL (SALISHAN NEIGHBORHOOD REVITALIZATION); NIC LEHOUX (156 WEST SUPERIOR CONDOMINIUMS)

Residential News

AIA HOUSING COMMITTEE AWARD: SPECIAL HOUSING

Project: *Patrolia Loft*
Location: *Boston*
Architect: *Ruhl Walker Architects*
Client: *Brian Patrolia*

The Patrolia Loft is designed for a wheelchair-bound client. Accessible elements are not concealed unnecessarily but are incorporated honestly into the design, without becoming afterthoughts or distractions. For example, the kitchen counters run at two levels—an attractive design detail that allows visitors to participate in kitchen activities.

Project: *Regional Homeless Center for Los Angeles*
Location: *Los Angeles*
Architect: *Jeffrey M. Kalban & Associates Architecture*
Client: *People Assisting the Homeless (PATH)*

A major renovation of an abandoned 1960s three-story office building turned it into the 40,000-square-foot Regional Homeless Center for Los Angeles. A ground-floor "mall" of services houses 19 organizations and agencies to assist the homeless in transitioning back to mainstream society. Residential areas contain individual sleeping quarters and transitional housing with kitchen and dining spaces. The jury calls it "an amazing transformation of a brutal building, which enhances its environment and makes it a welcome addition to the neighborhood."

Project: *The Plaza Apartments*
Location: *San Francisco*
Architect: *Leddy Maytum Stacy Architects and Paulett Taggart Architects, in association*
Client: *Public Initiatives Development Corporation*

The client replaced the Plaza Hotel with a mixed-use development for chronically homeless people. More than 100 studio apartments incorporate private kitchens and baths. The brightly colored facade, ground-floor commercial space, theater entrance, and residential courtyard enhance the streetscape and make a critical addition to the revitalization of the community.

Project: *The DESIGNhabitat 2 House*
Location: *Greensboro, Ala.*
Architect: *The DESIGNhabitat 2 Studio, School of Architecture, Auburn University—David W. Hinson, AIA*
Client: *Hale County (AL) Habitat for Humanity*

Designed for Habitat for Humanity, the DESIGNhabitat 2 House was completed in June 2006 for a family that lost its home to Hurricane Katrina. The DESIGNhabitat 2 Studio in the School of Architecture at Auburn University is led by David W. Hinson, AIA. The house integrates the modular construction process with design-quality goals, climate-appropriate design features, and energy performance. The jury noted its exceptional energy efficiency. The studio hopes to promote the integration of modular construction in future affordable-housing development initiatives.

Project: *Shirley Bridge Bungalows*
Location: *Seattle*
Architect: *Ron Wright and Associates/Architects*
Client: *AIDS Housing of Washington*

Shirley Bridge Bungalows respond to the shortage of affordable and appropriate housing for low-income people disabled by AIDS. Six cottages are organized around a central common space. Features like a forced-air heating system, which increases ventilation and air quality, enhance independent living and reduce the rate of opportunistic infections.

PHOTOGRAPHY: © GREG PREMRU PHOTOGRAPHY (PATROLIA LOFT); WAYNE THOM (REGIONAL HOMELESS CENTER FOR LOS ANGELES); DAVID HINSON, AIA (DESIGNHABITAT 2 HOUSE); TIM GRIFFITH (THE PLAZA APARTMENTS); TANIA WESTBY (SHIRLEY BRIDGE BUNGALOWS)

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Residential News

AIA/HUD SECRETARY AWARDS: EXCELLENCE IN AFFORDABLE HOUSING DESIGN

Project: *El Carillo Housing Authority*
Location: *Santa Barbara, Calif.*
Architect: *Cearnal Andrulaitis*
Client: *Housing Authority, City of Santa Barbara*

Designed in the Spanish Colonial Revival style, the El Carillo Housing Authority raises the bar for aesthetics in affordable-housing design. Responding to a growing homeless population and the closure of several affordable, single-room-occupancy structures over the past several years, the City of Santa Barbara has created a facility worthy of recognition. One juror raved, "One's preconceived idea of what affordable housing looks like has been totally erased. Wow!" In addition to the residential units, there are on-site resident services providing support, including job training, employment-placement assistance, and help with independent living for those with disabilities or disadvantages. "This sets a high and welcome precedent for private/public partnerships to solve the dire need for affordable housing in one of the most expensive towns in the nation," said the jury.

AIA/HUD SECRETARY AWARDS: COMMUNITY-INFORMED DESIGN

Project: *High Point Community*
Location: *Seattle*
Architect: *Mithun*
Client: *Tom Phillips, Seattle Housing Authority*

Recognizing designers' facilitation of community involvement, the Community-Informed Design Award seeks projects that focus on the design process as much as the resulting physical structures. The High Point Community in Seattle replaces a previous community, designed after World War II. Half of the 1,600 new residential units are designated for low-income residents, and half are market-value homes. The neighborhood integrates a variety of incomes, ethnicities, and family structures, inviting social contact and shared community identity. Aware of the difficulties of the interactive design process, the jury was impressed by the results, calling it "the highest standard for multicultural, multilingual participation."

AIA/HUD SECRETARY AWARDS: CREATING COMMUNITY CONNECTION

Project: *Salishan Neighborhood Revitalization*
Location: *Tacoma, Wash.*
Architect: *Torti Gallas and Partners*
Client: *Tacoma Housing Authority*

The integration of parks, paths, and swales throughout the Salishan Neighborhood Revitalization in Tacoma, Washington, creates a connective, pedestrian-friendly neighborhood. The Creating Community Connection award recognizes projects that incorporate housing within other community amenities for the purpose of revitalization or planned growth. With a HOPE VI grant, Torti Gallas and Partners strove to restore and protect the community's natural resources, which had been damaged by the previous development's mistakes. Achieving 91 percent filtration of all storm water on-site, the project vastly reduces pollution flowing into the neighborhood's creek. The jury appreciated that the new design is not only sensitive to the needs of the community, but to the surrounding environment as well.

PHOTOGRAPHY: © AMBER MEDLEY (EL CARILLO HOUSING AUTHORITY); DOUG SCOTT (HIGH POINT COMMUNITY); STEVE HALL (SALISHAN NEIGHBORHOOD REVITALIZATION)

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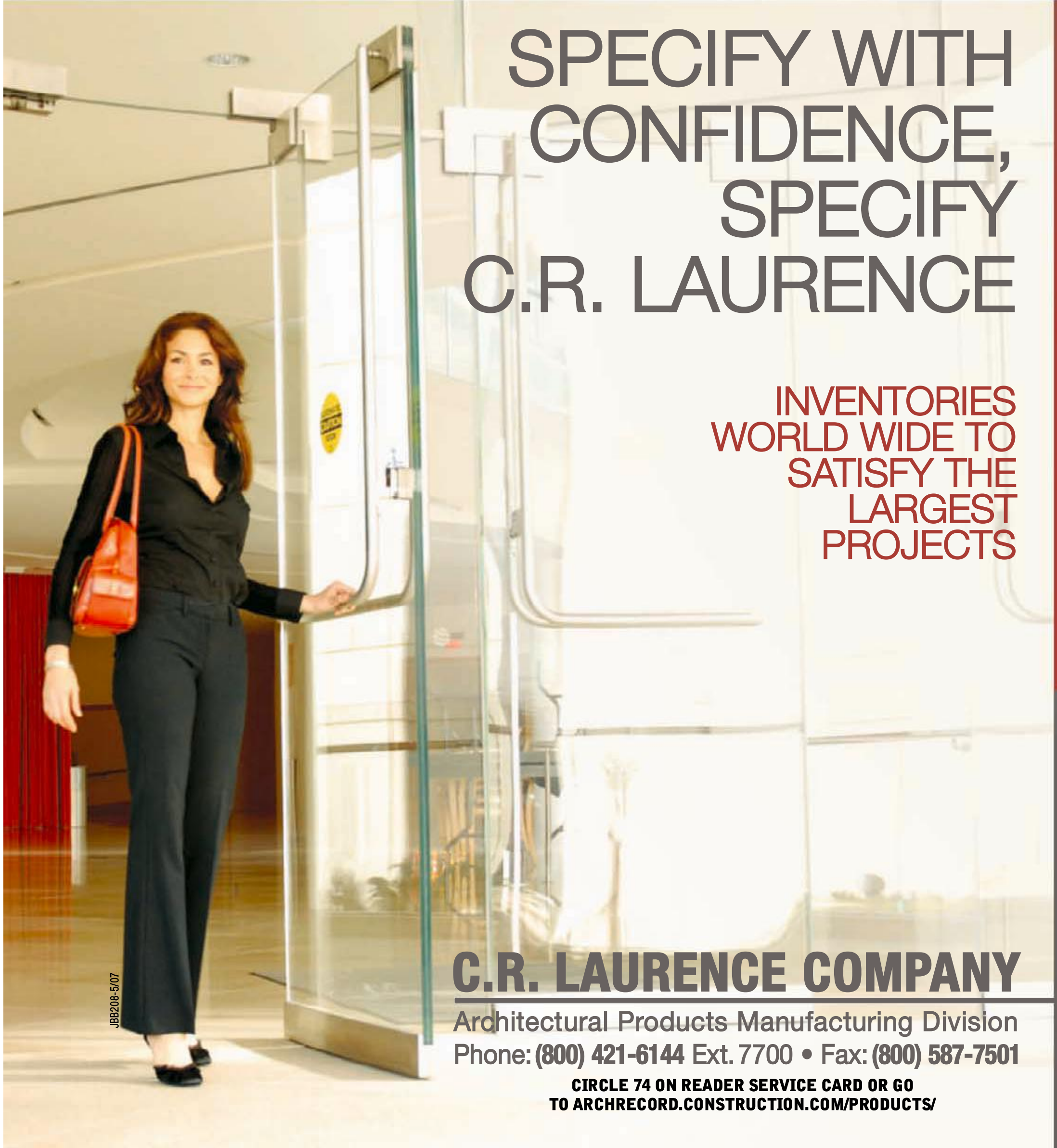

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Entry fees and a letter of intent written on the organization's letterhead must be received by August 31, 2007. A proposal, three reader copies, and supporting materials should be sent to the American Institute of Architects no later than September 21, 2007. For information on the CES Award for Excellence, including submission instructions, visit **www.aia.org/conted2008**.

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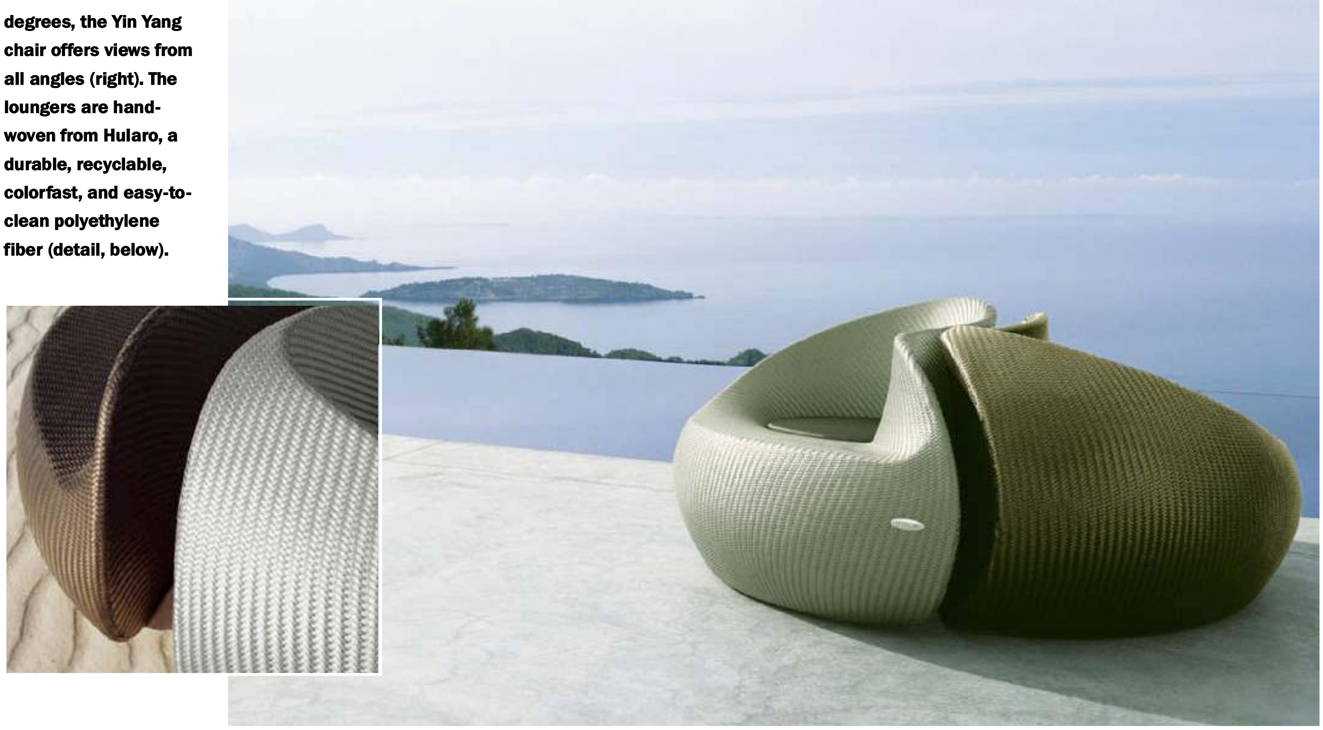
Product Focus

Landscape Products

Our roundup this month includes a mesh fence and bike rack that double as sculpture and help make our outdoor spaces more comfortable and livable. For the latest landscape product introductions, visit the ASLA Annual Meeting & Expo in San Francisco from 10/5 to 10/9. *Rita Catinella Orrell*

Able to rotate 360 degrees, the Yin Yang chair offers views from all angles (right). The loungers are handwoven from Hularo, a durable, recyclable, colorfast, and easy-to-clean polyethylene fiber (detail, below).



Handwoven, weatherproof chair inspired by the harmony of opposites

Yin Yang is the latest signature collection of indoor/outdoor lounge seating from Janus et Cie. Designed exclusively for Dedon by Nicolas Tompkins, Yin Yang takes its shape from the nesting crescents that form the ancient Chinese symbol for nature's harmony of opposites: dark and light, masculine and feminine, active and passive.

According to Janus et Cie's marketing director Wendy Rhiger, the chair created a buzz at the Salone del Mobile this year and just took home a red dot design award, one of the largest and most renowned product design award competitions in the world.

Tompkins was inspired to create the tête-à-tête loungers while on Olango Beach on Cebu island in the Philippines. Cebu, a mecca for the traditional art of handweaving, is also the location of Dedon's manufacturing facility.

Ideal for residences, hospitality, museums, corporate campuses, universities, and shopping centers, the flowing form of each Yin Yang chaise incorporates more than 13,000 feet of bronze or platinum-hued Hularo synthetic fiber. The fiber is handwoven by skilled Filipino artisans over a powder-coated aluminum frame shaped to the alternating convex and concave surfaces of the design.

Hularo polyethylene fiber is easy to maintain and clean, tear-resistant, colorfast, and recyclable. It is resistant to weather, UV, soil, microorganisms, and body lotions. It is also resistant to chlorinated and sea water, making it ideal for spa, seaside, and poolside applications.

Each half of the piece features an integrated seating cushion for the single sitter. The circular seats contrast either the bronze or platinum color of the chair body and are made of a polyurethane surface and polyester backing, offering great wearability and easy maintenance. Many other pieces within the Dedon collection use the same bronze- and platinum-colored fibers, allowing them to easily coordinate with the lounge chairs.

The individual chairs are 32.8" high, 75.2" wide, have a seat height of 18 ½", and weigh approximately 66 pounds. The individual and combined chairs are also rotatable 360 degrees.

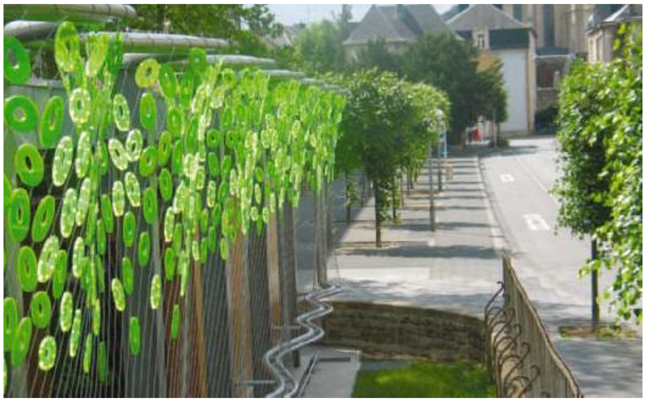
According to Rhiger, the chair has already been specified in several projects, including the Regalia Condominium, in Sunny Isles Beach, Florida; Monument Place Condominium, in Fairfax, Virginia; and the Potomac Yard shopping center, in Arlington, Virginia. Janus et Cie, West Hollywood, Calif. www.janusetcie.com **CIRCLE 221**

For more information, circle item numbers on Reader Service Card or go to **architecturalrecord.com/products/**.

Products Landscape Products

◄ Teak and ipé deck tiles

For remodeling or new construction, teak deck and patio tiles from East Teak are made of high-quality, kiln-dried, Indonesian plantation teak. East Teak's ipé tiles offer the durability of teak but feature darker wood tones. Ipé tiles age to a silvery gray or maintain their rich dark-brown color with a penetrating wood sealer. Both wood tiles are ideal for condo or apartment balconies, existing wood deck or cement patios, roof decks, or walkways. East Teak Fine Hardwoods, Dallas. www.eastteak.com **CIRCLE 222**

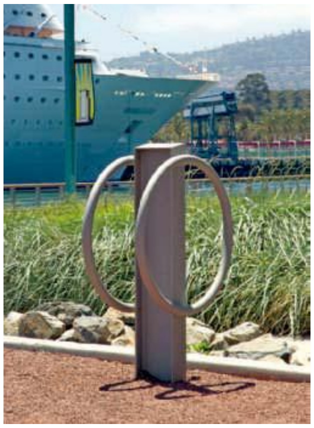


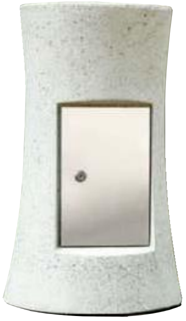
▲ Screening a new piece of art

For the Dellheicht Primary School complex in Luxemburg by Echternach-based architects Witry & Witry, a stainless-steel cable mesh serves as both protection and artwork for a covered break hall that links the traditional school building with a new glass sports building. South African installation artist Sally Arnold incorporated large green Plexiglas sequins into the mesh to indicate the areas designated for sports and games. Carl Stahl DecorCable Innovations, Chicago. www.decorcable.com **CIRCLE 223**

► Bicycle sculpture

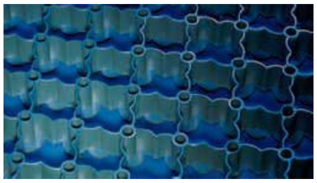
The Tendo outdoor bicycle rack, designed by German architect Karsten Winkels, is suited for city sidewalks, college and university campuses, corporate grounds, malls, public parks, and waterfront areas. Characterized by a modern, two-sided circular design with an overall vertical orientation, Tendo offers a sculptural appearance when not in use. It comes standard in graphite gray, but special colors are available. All hardware is stainless steel. HessAmerica, Gaffney, S.C. www.hessamerica.com **CIRCLE 224**





◄ Smokeless ash receptacle

According to the International Coastal Cleanup organization, cigarette litter is at the top of its list of collected trash, accounting for nearly 35 percent of all debris picked up. Quick Crete's Halo ash receptacle not only encourages the proper disposal of cigarette waste, but virtually eliminates tobacco smoke and odors by trapping them inside, keeping the surrounding air cleaner. The product's covered design also eliminates the unsightly appearance caused by partially smoked or spent cigarette and cigar butts. The line is available in seven styles, ranging from classic to contemporary. Quick Crete, Norco, Calif. www.haloqc.com **CIRCLE 225**



◄ Hard landscaping aids

Markant by ACO includes a range of drainage and building products designed to meet the demands of residential projects. Three trench drain systems are available for driveways, patios, and other hard landscaped areas. DrainLine 100 (left) uses a polymer concrete V-shaped construction to maximize hydraulic performance. Made of 100 percent recycled plastic, GrassGrid (below left) reinforces grass areas to allow vehicle parking and traffic without excessive wear and erosion. ACO Polymer Products, Chardon, Ohio. www.acousa.com **CIRCLE 226**

◄ Water filters

Permapave Permeable pavers are used worldwide as a result of public concern about ecological and legal requirements that relate to storm-water management. Made from natural stone, the 100 percent porous pavers can help eliminate pollutants from waterways, recharge groundwater, and turn water waste into a positive feature. With a flow rate of up to 7.5 gallons per second per square foot, they can eliminate 100 percent of gross pollutants and an extremely high percentage of hydrocarbons. Permapave Industries, Syosset, N.Y. www.permapavellc.com **CIRCLE 227**

For more information, circle item numbers on Reader Service Card or go to **architecturalrecord.com/products/**.

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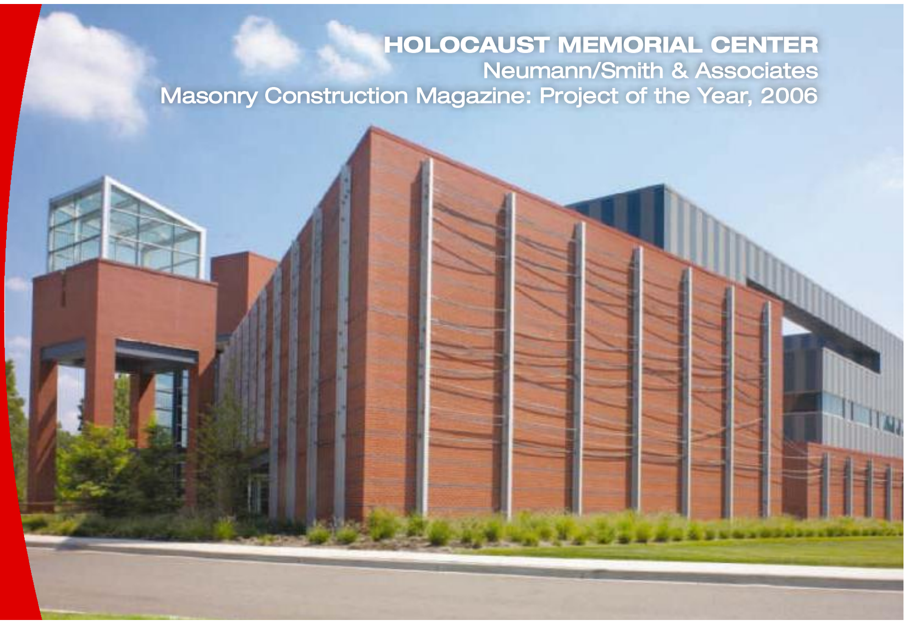

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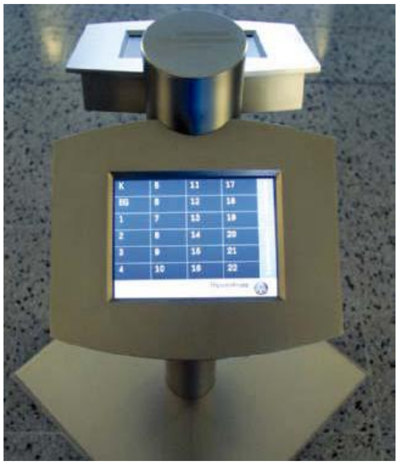
Product Briefs

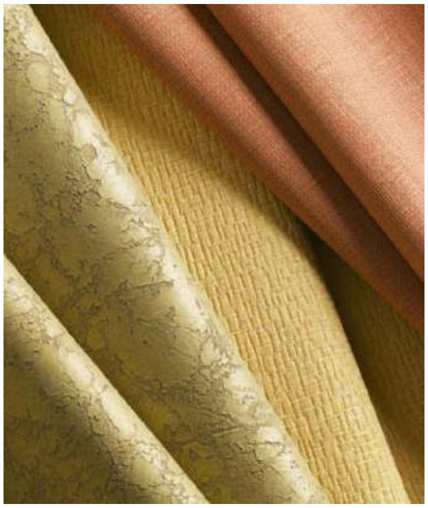


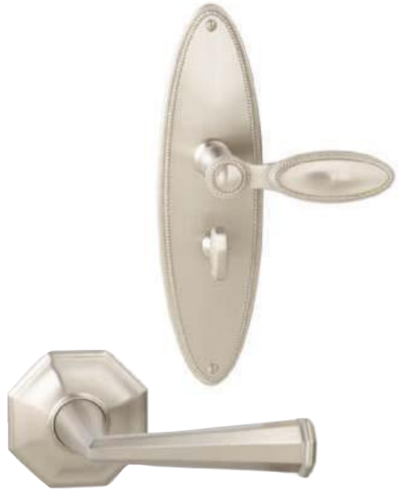
◄ ADA-compliant dispatch system

While other manufacturers use a push-button keypad, the Destination Dispatch system from ThyssenKrupp uses a touch-screen kiosk (housed in a stand-alone column or mounted in a custom cabinet to match building decor) to direct passengers to specific elevator cars in order to reduce trip time and crowding. Destination Dispatch is available in an up-peak version with kiosks only in high-traffic areas, such as lobbies and cafeterias, or with kiosks on every floor of the building. ADA-compliant, it has a special button that provides audible voice instructions and gives directions to the proper car and announces its arrival. In addition, it calls the least crowded car for better wheelchair access, and slows door operation to ensure adequate boarding time. ThyssenKrupp Elevator, Frisco, Texas. www.thyssenkruppelevator.com **CIRCLE 228**

► A second chance for vinyl

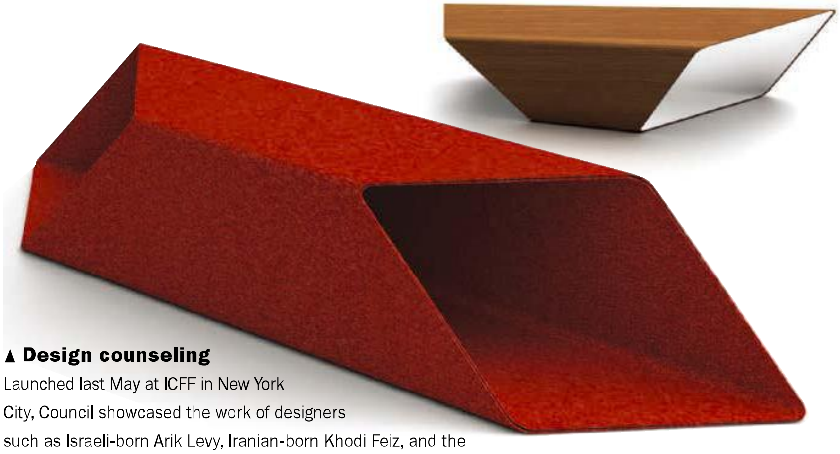
According to LSI Wallcovering, its new Second-Look collection is the first line of recycled vinyl wall covering on the market. Three collections include 20 percent recycled content and a minimum of 10 percent post-consumer content. Highly dimensional selections include Umbria (near right), a corklike plaster effect from the Versa collection; Tambur (middle), a classic basketweave design from the Plexus collection; and Ikat (far right), a soft linen texture from the Cirqa collection. The low-VOC, Type II, 20-ounce wall covering measures 54" wide, uses water-soluble inks and water-based adhesives, and is available with Permavent microventing that allows walls to breathe. Designers can also reclaim vinyl wall covering of any make from their renovation projects and send it to LSI for recycling into postconsumer recycled wall covering. LSI Wallcoverings, Louisville. www.secondlookwc.com **CIRCLE 229**





◄ Handled with care

The skilled craftsmen of Von Morris hand-finish each piece of door hardware to achieve a rich high luster found only in hand-rubbed brass. Each piece is then clear-coated with a catalyzed epoxy lacquer to produce a long-wearing protective coating. The entire Von Morris portfolio is available in 30 finishes. The company's own proprietary finish, Eterna, is guaranteed not to tarnish, pit, flake, or discolor for as long as the buyer owns the home. Two of the six signature collections from the company include Beaded (top left), a Victorian style with a highly detailed beaded edge and slightly raised escutcheon plate and Moorestown (bottom left), which pairs an octagonal knob or lever that gracefully lofts into a round shank. Von Morris, Camden, N.J. www.vonmorris.com **CIRCLE 230**

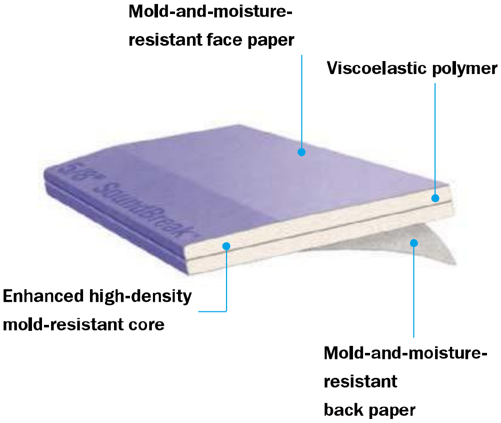


▲ Design counseling

Launched last May at ICFF in New York City, Council showcased the work of designers such as Israeli-born Arik Levy, Iranian-born Khodi Feiz, and the San Francisco–based firms One & Co and Mike and Maaike. The company's premiere collection includes dining and lounge pieces, storage, seating, and occasional tables. Designed by company founder Derek Chen, Section (above) can be used as seating, storage, and display. Available veneered or upholstered for indoor use or in powder-coated steel or polished stainless steel for outdoors. Council, San Francisco. www.councildesign.com CIRCLE 231

► Commercial wall system

A new commercial wall system from Abet Laminati has been granted three U.S. patents for the aluminum profiles supporting the panels, including the corner, end cap, and connector profiles. The system is based on a tongue-and-groove fastening system, where the aluminum profile is fastened to a wall and/or stud to provide the tongue and panels with a corresponding groove. The system offers the full range of Abet's laminates, from solid colors and textures to silk-screened designs. Various accessories easily hook into the grooves. Abet Laminati, Englewood, N.J. www.abetlaminati.com CIRCLE 232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◄ Avoid "accidental intimacy"

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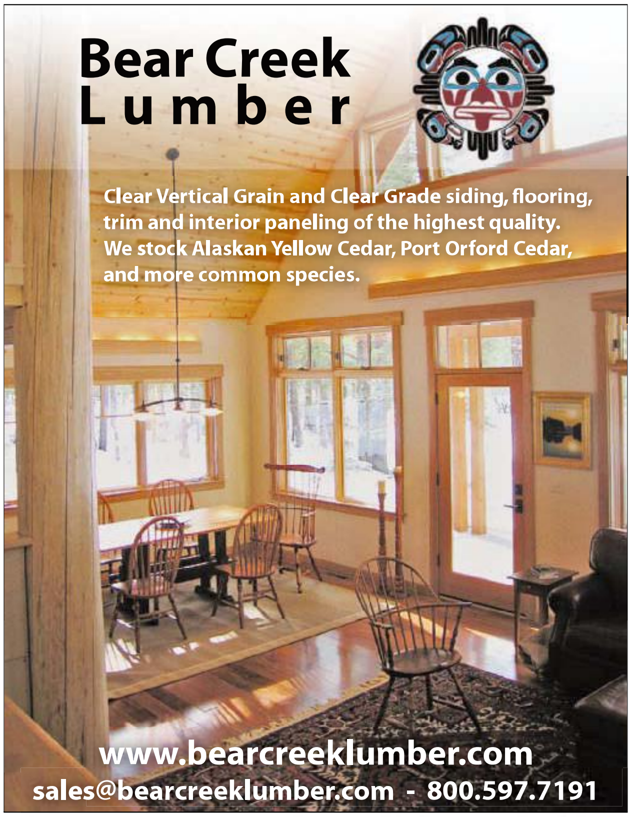

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Product Resources Literature

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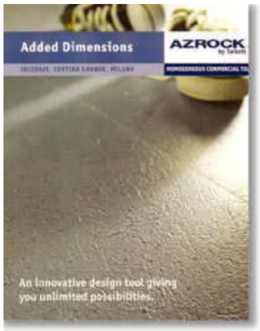
Carpet company goals

This is Not a Carpet Company is a new sustainability brochure available from Tandus. The well-designed brochure is full of statistics, charts, and stories demonstrating the carpet company's goals toward becoming a better corporate citizen and environmental steward. Tandus, Dalton, Ga. www.tandus.com **CIRCLE 234**

Color concept palette

The new *Concepts in Color* paint palette by Sherwin-Williams enables users to easily select color from 250 new shades. The palette is organized into 10 color families and displayed on 3" x 5" paint chips. Suggestions for complementary interior and exterior colors are noted on the back of each chip. The entire collection can be previewed online using the *Color Visualizer* tool. Sherwin-Williams, Cleveland. www.sherwin-williams.com **CIRCLE 235**

Concepts in Color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Added dimensions

Resilient flooring manufacturer Azrock by Tarkett has launched a new design tool on its Web site called *Added Dimensions*. This tool allows designers, architects, and flooring contractors to customize Azrock's most popular homogeneous products by selecting the pattern, texture, tile size, and grout treatment. Tarkett, Houston. www.tarkett.com **CIRCLE 236**

Building green

Grace Construction Products, a worldwide leader in products for the construction industry, has introduced a new guide, *Building Green with Grace*. This guide helps architects and specifiers select products from the company that may help achieve points in the LEED green building rating system. Grace Construction Products, Cambridge, Mass. www.graceconstruction.com **CIRCLE 237**

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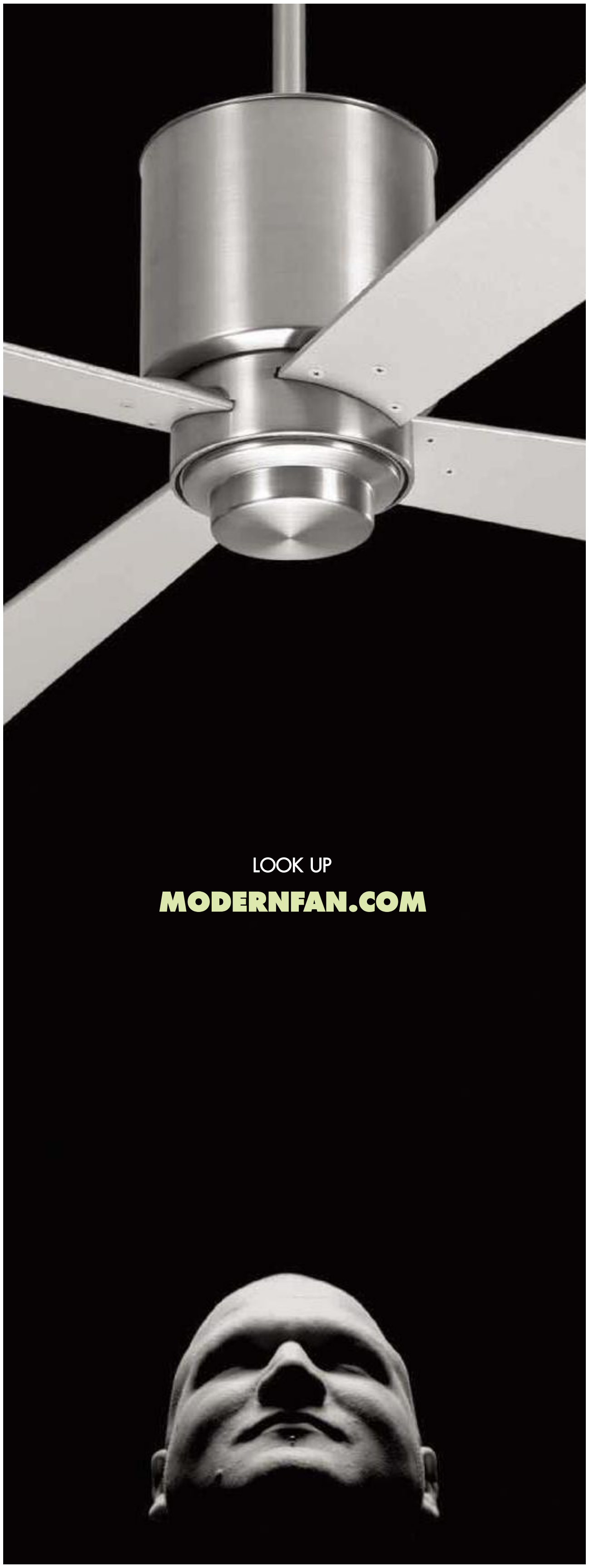
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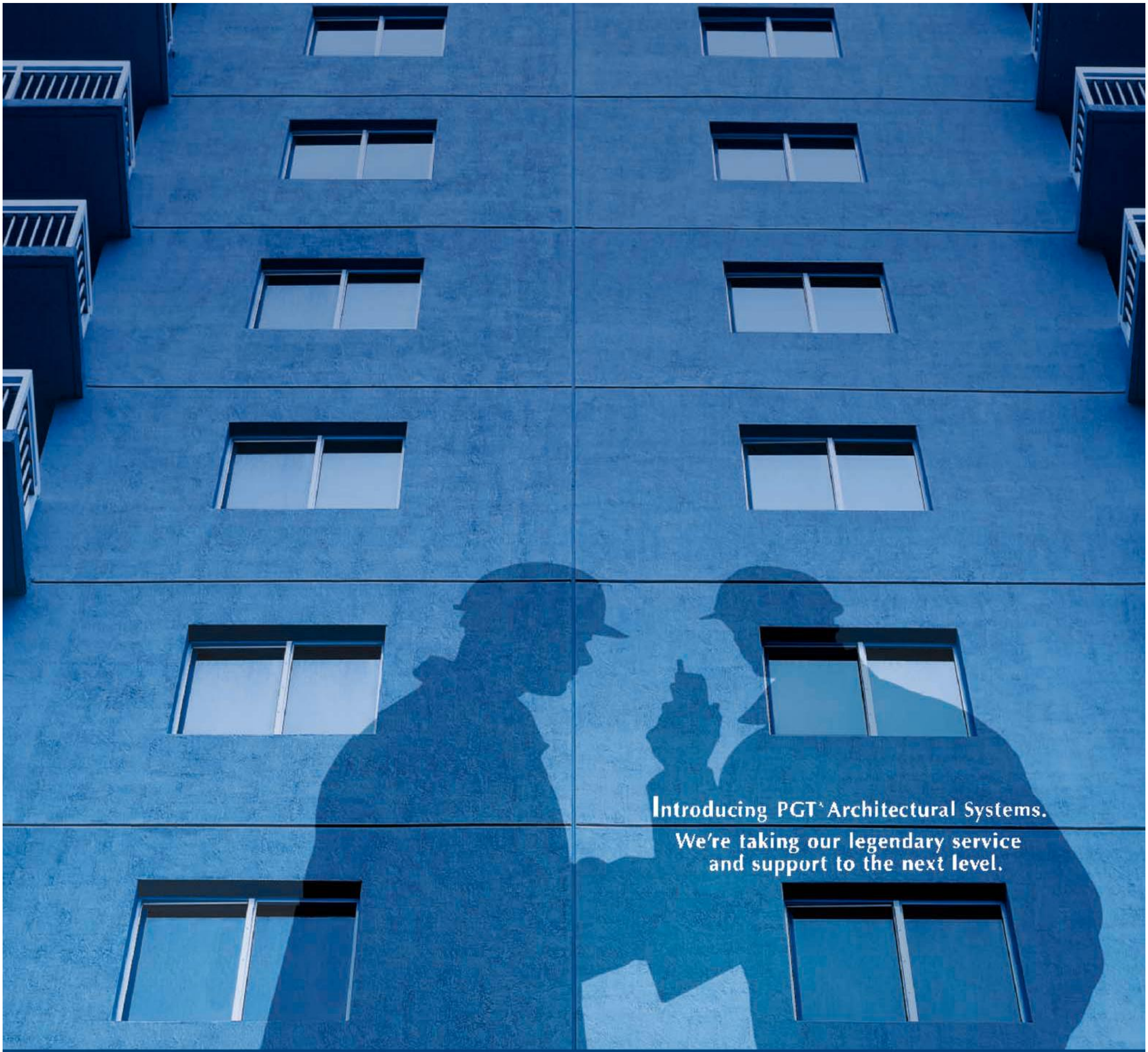
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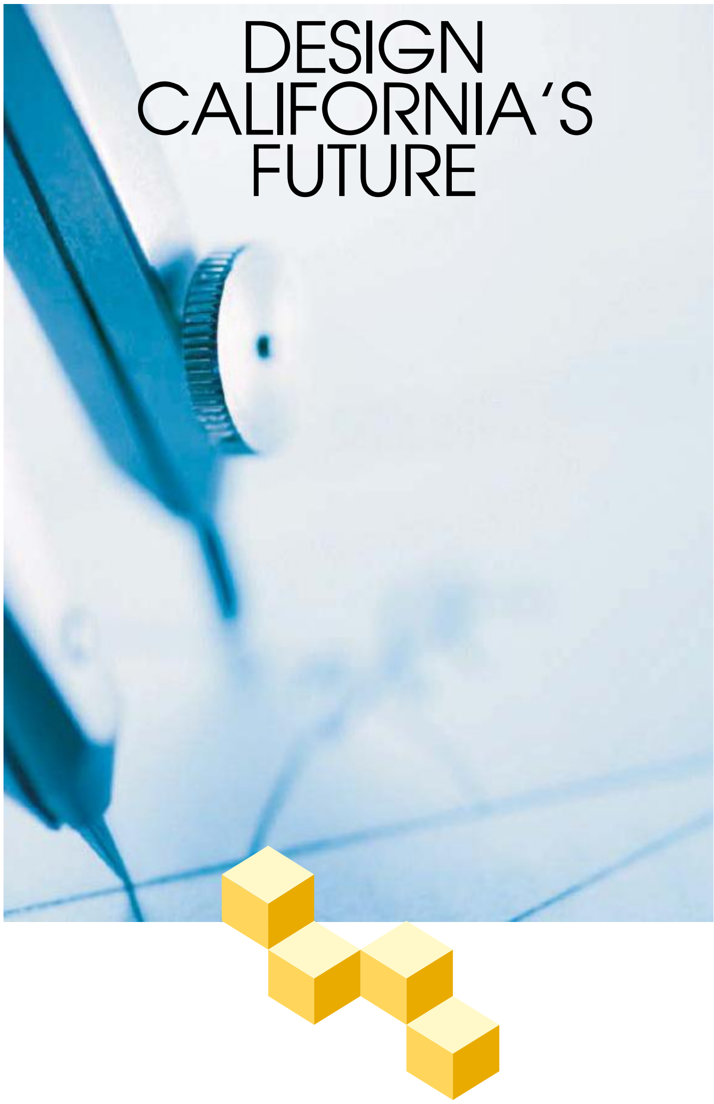

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Product Resources On the Web

www.hermanmiller.com/environment On its Web site, Office furniture and services provider Herman Miller has issued its first corporate sustainability report tracking the company's progress toward meeting key economic, social, and environmental objectives. The report, titled *The Journey Toward Sustainability*, is based on the company's 2006 fiscal year and focuses primarily on its North American operations.

todl.com

Find what you need...when you need it.

www.todl.com The Trade Only Design Library (TODL), a free online resource for architects, designers, facility managers, builders, stocking retailers, and other professional buyers, recently added listing information on specialty architectural products from Technical Glass Products (TGP). The site now features Pilkington Profilit channel glass, Neopariés stone glass panels, and TGP's new steel curtain wall and designer steel framing systems, along with Aquaglass, Veluna, and GlassOre decorative glass.

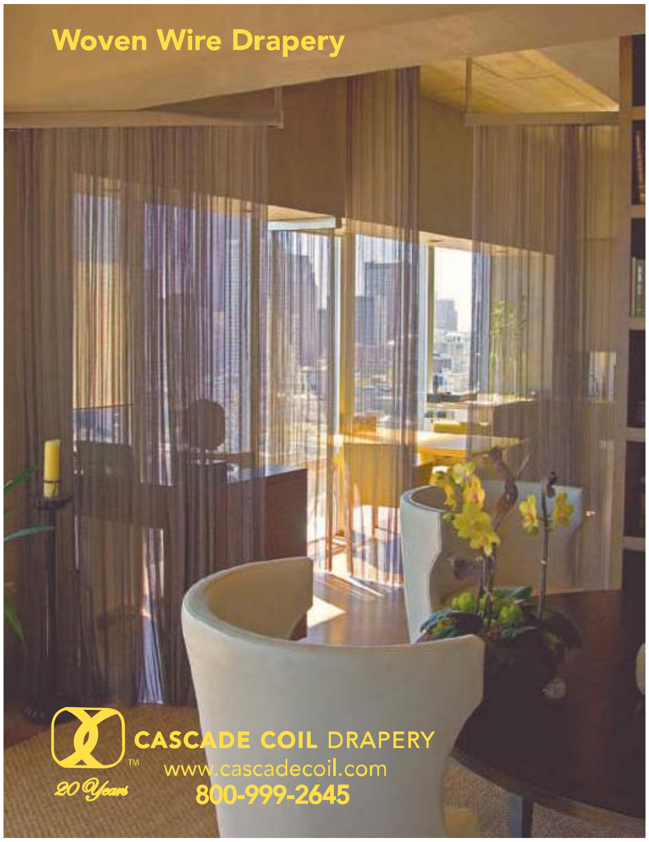
Juno Lighting Group

Nine great lighting brands are now available from a single source

www.junolightinggroup.com Juno Lighting Group, a leading North American lighting manufacturer, launched a new Web site that combines product information for its nine leading brands in one comprehensive database. Each product includes a spec sheet, instruction sheet, IES files, product guide page, image, line art, and finish color swatches. The database allows users to effectively search for the best lighting solutions for commercial, industrial, and residential applications.

Code Compliant Lighting Control Solutions for Office Buildings

www.wattstopper.com/products/solutions/BestPracticeGuideMainPage.html Watt Stopper/Legrand's new e-book, *Best Practice Guide to Office Buildings 2007*, helps specifiers and building managers determine the optimal lighting-control solutions for office spaces that balance the needs to save energy, comply with building codes, and provide occupant satisfaction. The e-book features links to pertinent data including solution-specific product information as well as downloadable CAD drawings.



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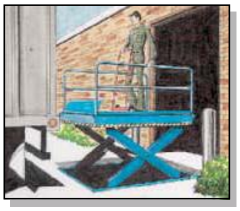

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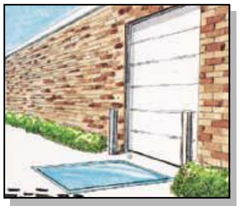

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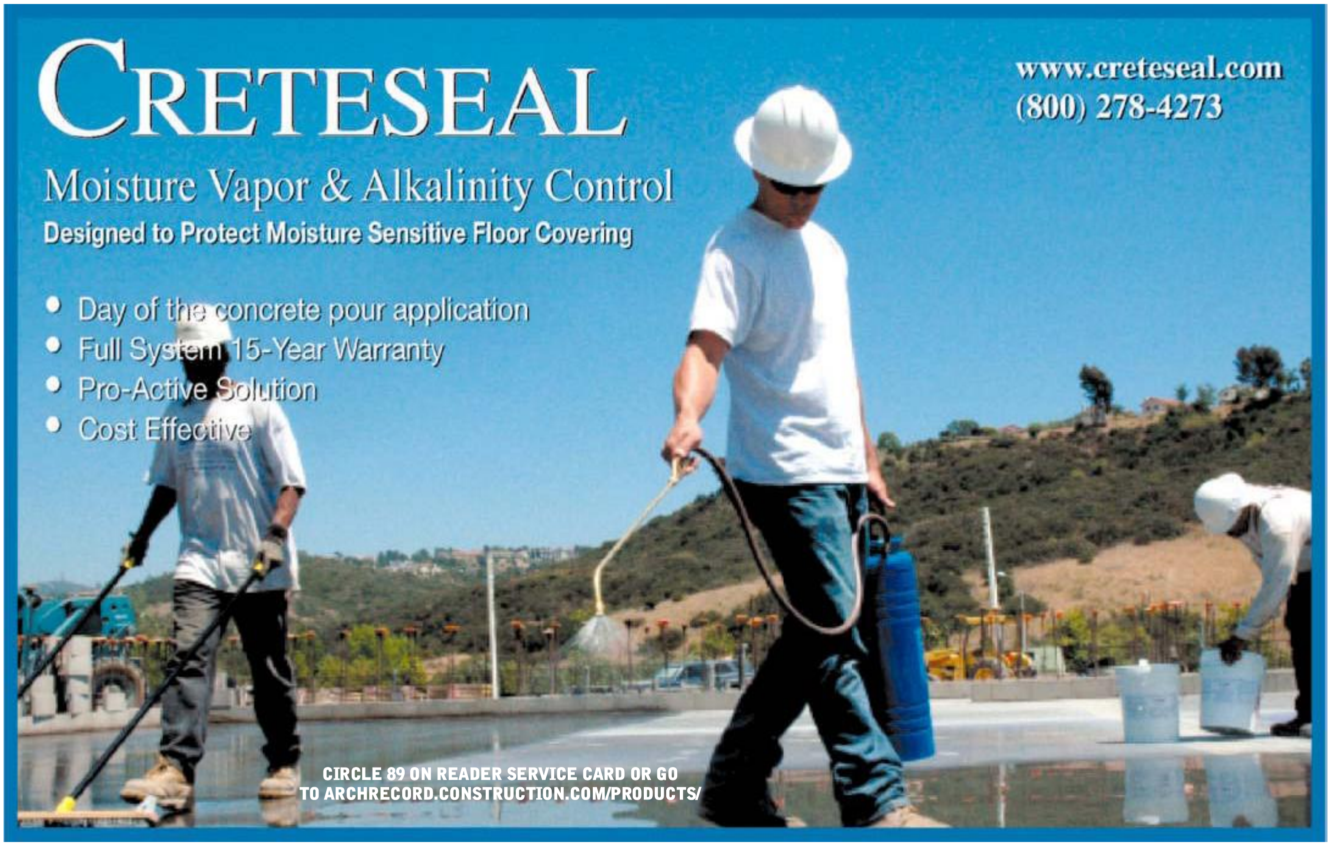
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Dates & Events

New and Upcoming Exhibitions

Lost Vanguard: Soviet Modernist Architecture, 1922–32
New York City
July 18–October 29, 2007
This exhibition examines Soviet avant-garde architecture in the post-revolutionary period. Although integral to the history of modern architecture, the featured projects have seldom been published and remain largely unknown. The exhibition highlights some 80 photographs by architectural photographer Richard Pare, who made eight trips between 1992 and 2002 and created nearly 10,000 images to compile a timely documentation of these structures, many of which are now in various states of decay, transformation, and peril. Pare's images are supplemented by Soviet periodicals to provide historical context for an exploration of this extraordinary architecture. At the Museum of Modern Art. Call 212/708-9400 or visit www.moma.org.

On a Grand Scale: The Hall of Architecture at 100
Pittsburgh
September 22, 2007–January 13, 2008
In celebration of the 100th anniversary of the Carnegie Museum of Art's Hall of Architecture, the museum will present an exhibition surveying its collection of nearly 150 plaster architectural casts that Andrew Carnegie created specifically for this magisterial space. At the time of the hall's inauguration in April 1907, the museum joined the ranks of prominent American museums exhibiting plaster casts of monuments from around the world. To ensure the hall's relevance to visitors, Carnegie surveyed architects of the day to determine which casts the museum would acquire. At the Heinz Architectural Center. For more information, call 412/622-3131 or visit www.cmoa.org.

30th Annual Fall Pilgrimage of Homes
Natchez, Miss.
September 29–October 13, 2007
With more pre-1860 buildings than any other city of its size in the United States, Natchez offers living history as hostesses in hoopskirts escort guests on tours through 18th- and 19th-century country houses, suburban villas, and grand mansions. For 30 years, Natchez has welcomed lovers of history, architecture and decorative arts during Natchez Fall Pilgrimage. Call 800/647-6742 or visit www.natchezpilgrimage.com.

Ongoing Exhibitions

Twenty + Change
Toronto
Through July 8, 2007
Twenty + Change is an exhibition of contemporary architecture, landscape, and urban design by 20 of Toronto's most innovative design practices. At the Gladstone Hotel. Visit www.twentyandchange.org.

Frank Lloyd Wright's Guggenheim Museum: Restoring a Masterpiece
New York City
Through July 8, 2007
This exhibition documents the ongoing restoration of Frank Lloyd Wright's architectural masterpiece on Fifth Avenue. The multimedia presentation includes photographs, drawings, computer-generated images, and videotaped interviews with key members of the restoration's design team and with Peter B. Lewis, lead donor for this restoration, as well as Mayor Michael R. Bloomberg, among others. At the

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Guggenheim Museum. For more information, call 212/423-3500 or visit www.guggenheim.org.

Honda Advanced Design Center
Los Angeles
Through July 8, 2007.
George Yu Architects' SCI-Arc Library exhibition. At The Southern California Institute of Architecture (SCI-Arc). Call 213/613-2200 or visit www.sciarc.edu.

AIA150
AIA/Los Angeles Design Awards Exhibit
Los Angeles
Through July 16, 2007
This show offers an opportunity for the public to experience and celebrate the quality and variety of Los Angeles Architecture, showcasing more than 350 Design Awards from 2007 and Next LA entries. At the Broad Art Center at UCLA. For more information, call 213/639-0777 or visit www.aialosangeles.org.

AIA150
Studio @ the Center: Lighting Design
New York City
Through August 4, 2007
This exhibition will highlight the work of 12 students from the High School of Art and Design who are taking part in the intensive after-school program that exposes them to one area of design through interaction with design professionals. At the Center for Architecture. Call 212/683-0023 or visit www.aiany.org.

The Park at the Center of the World: Five Visions for Governors Island
New York City
Through August 25, 2007
This exhibition features five landscape architecture and architecture teams competing to design compelling new open spaces for Governors Island. The teams presenting designs at this exhibition have received critical acclaim for their buildings and landscapes around the world. They were chosen from a field of 29 teams representing 10 countries and 65 firms, and they will compete to create a new park on Governors Island. At the Center for Architecture. For information call 212/683-0023 or visit www.aiany.org.

The Newhouse Program & Architecture Competition: 25 Stories for 25 Years
Chicago
Through August 25, 2007
In celebration of the 25th anniversary of the Newhouse Program & Architecture Competition, this exhibition will honor past and current participants. A series of specially commissioned photographs by Joe Wigdahl of alumni from the 25 years of the program will be in the John C. Buck Lecture Hall of the Santa Fe building. Call 312/922-3432 or visit www.architecture.org.

Reinventing the Globe: A Shakespearean Theater for the 21st Century
Washington, D.C.
Through August 27, 2007
This exhibition traces the longstanding fascination with the Globe Theater, in which many of Shakespeare's plays premiered, and the numerous efforts to evoke the spirit of that structure in subsequent theater designs. The show culminates with a series of hypothetical Shakespearean theaters for the 21st century, which suggest innovative strategies for bringing the playwright's work to modern audiences. At the National Building Museum. Call 202/272-2448 or visit www.nbm.org.

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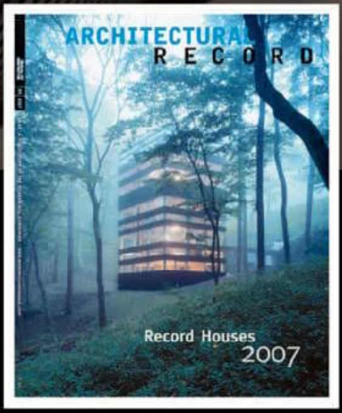

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Young Architects Program
New York City
Through September 8, 2007
This exhibition features the proposals of the five finalists of the MoMA/P.S.1 Young Architects Program. Now in its eighth year, the program calls on emerging architects to create a temporary installation in P.S.1's courtyard, which will serve as the setting for the museum's summertime Warm Up series. The designers present engaging architectural solutions that modulate sun, shade, and water in this outdoor space. This year's finalists included Ball-Nogues (Los Angeles), Gage/Clemenceau Architects (New York), IwamotoScott (San Francisco), Mos (Cambridge, Massachusetts-New Haven), and Ruy Klein (New York). At the Museum of Modern Art. Call 212/708-9400 or visit www.moma.org.

Devil in the White City Tour
Chicago
Select Fridays and Sundays, through October 28, 2007
The tour is based on Eric Larson's best-selling book and focuses on two events: the World's Columbian Exposition of 1893 and the emergence of America's first serial killer to come to public attention. A slide presentation is followed by a bus tour of Prairie Avenue and Jackson Park with a visit to many buildings and places identified in the book. At the Chicago Architecture Foundation's ArchiCenter. For more information, call 312/922-3432 or visit www.architecture.org.

Lectures, Conferences, and Symposia

Talking Globally About Gardens
New York City
July 9, 2007
Donna Dorian, *Garden Design*'s Style Editor, will speak on Moroccan gardens. The same evening, garden writers Susan Lowry and Nancy Berner will present "Paris Parks." Dorian recently traveled to Morocco with landscape architect Topher Delaney to explore historic and contemporary gardens. Susan Lowry and Nancy Berner are the authors of *Garden Guide: New York City* (Random House).At Columbia University. These events are free but reservations are requested. For more information or to RSVP, visit www.ce.columbia.edu/landscape.

Sustainable Architecture Lunchtime Lecture Series
Chicago
July 10, 2007
Recent Work of Farr Associates will be presented by founding principal Doug Farr. At the Chicago Architecture Foundation. For more information, call 312/922-3432 or visit www.architecture.org.

Why Dubai?
New York City
July 18, 2007
A panel discussion explores the reasons why Dubai is the focus of this century's competition for the World's Tallest Building, just as New York and Chicago were the arenas in the 20th century. At The New York Academy of Sciences. Visit www.skyscraper.org/burjdubai.

Eric R. Multhauf Lunchtime Lectures
Chicago
July 19, 2007
Lecture and book signing for *Chicago's Urban Nature: A Guide to the City's Architecture + Landscape*, by Sally A. Kitt Chappell.

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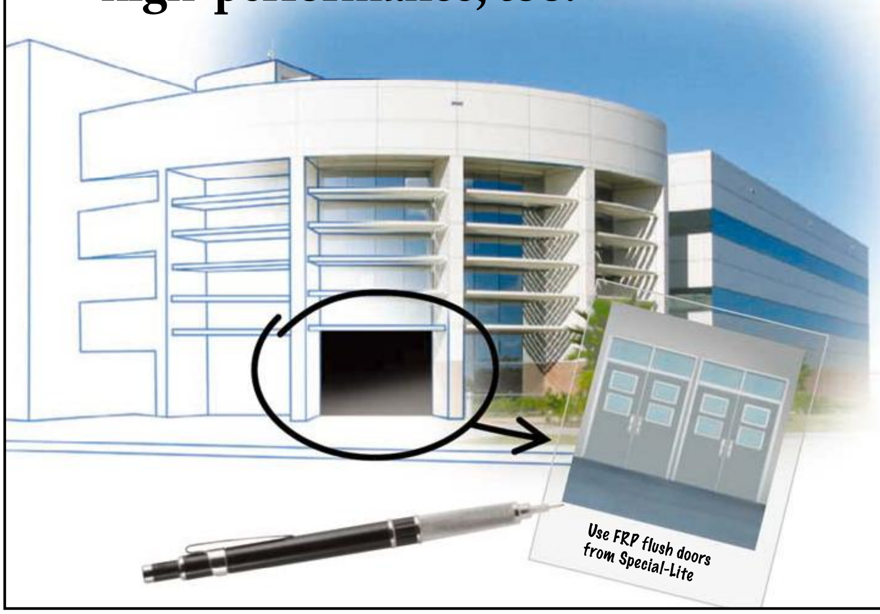
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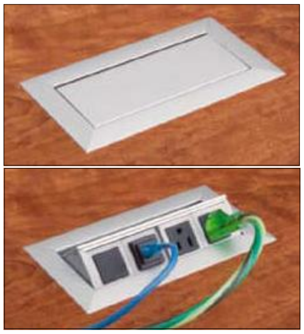

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July 31–August 1, 2007
Recognizing the need for architects, developers, interior designers, and other related professionals to better understand the role strategic branding plays in delivering effective solutions for clients, Harvard GSD has developed this new program as part of its Executive Education summer line-up. The two-day program will be conducted through discussions, presentations, and case studies that will include project clients on-hand, and a team-guided work exercise that will be reviewed by clients and others. For more information, call 617/384-7214 or visit www.gsd.harvard.edu and search for RBS07.

Architecture Camp
Pittsburgh
Through August 17, 2007
Architecture Explorations, a series of one- and two-week camps dedicated to architectural design, construction, form, and function, and presented in collaboration with Carnegie Mellon University's School of Architecture, are available for children ages four to 13, as well as high school students. The architecture camps are held at Carnegie Mellon University's architecture studios and in the Carnegie Museum of Art's Heinz Architectural Center. Call 412/622-3131 or visit www.cmoa.org.

Competitions

Design Trust for Public Space Call for Proposals
Deadline: July 27, 2007
New York City community groups and public agencies are invited to submit proposals for research, design, and planning projects that would benefit from private-sector expertise. Proposals must relate to the design or use of public space in the five boroughs of New York City. For more information, visit www.designtrust.org.

International Transit Design Competition
Registration Deadline: August 17, 2007
Submission Deadline: August 31, 2007
This ideas competition is intended to solicit innovative design solutions and dialogue about the possibilities for the role of public transportation in Columbus, Ohio, focusing on the passenger facilities and transit modes that will reconnect citizens, renew neighborhoods, and spark economic development. Visit www.columbusrewired.org.

Self-Sufficient Housing/ The Self-Fab House: 2nd Advanced Architecture Contest
Registration Deadline: September 17, 2007
An international summons to architects, designers, and students from around the world, inviting proposals for the construction of self-sufficient dwellings with an emphasis on exploring people's capacity to construct their own homes. Visit www. advancedarchitecturecontest.org.

Topeka Riverfront Student Design Competition
Deadline: October 5, 2007
An all ages student design competition to collect ideas for the development of Topeka's riverfront.

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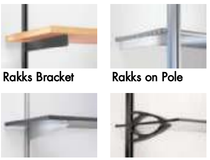

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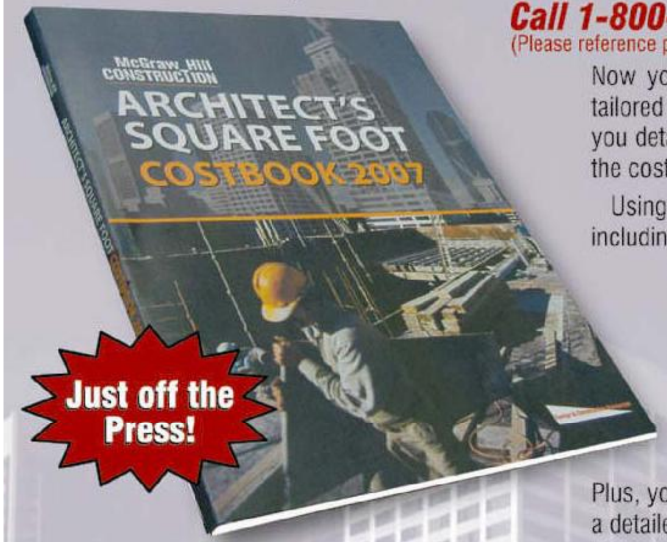

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There are three competition divisions: Kindergarten-6th Grade; 7th-12th Grade; and College Level. For information, visit www.reclaimourriver-topeka.org for more details.

AIA150

The American Institute of Architecture Students' (AIAS) 2nd Annual National Student Design Competition

Deadline: November 5, 2007

Developed for advanced students, this competition will challenge participants to design a pediatric outpatient rehabilitation center and family support facility utilizing architectural aluminum building products and systems. For more information, visit www.aias.org/kawneer.

Palladio Awards

Deadline: November 15, 2007

The Palladio Awards are named in honor of Andrea Palladio, the Renaissance architect who created modern architecture for his time while using models from the past. The program recognizes individual designers and/or design teams whose work enhances the beauty and humane qualities of the built environment through creative interpretation or adaptation of design principles developed through 2,500 years of the Western architectural tradition. Call 718/636-0788 or visit www.palladioawards.com.

Just Jerusalem

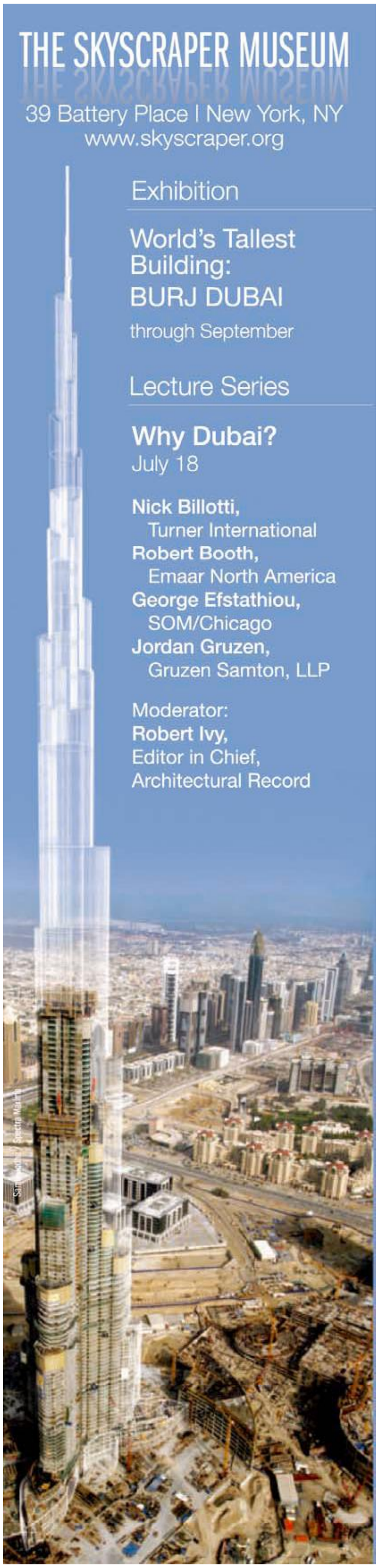
Deadline: December 31, 2007

This competition invites participants worldwide to submit urban plans and other creative works that consider novel ways to transform this fractious city into a place where contending ideas and citizenries coexist in peaceful ways. An international panel of diplomats, researchers, and professionals will jury the competition. The winning participants will be awarded fellowships at MIT, a prize equivalent to $50,000. Visit www.mit.edu/cis/jerusalem2050/.

Fourth Annual Extreme Redesign: The Ultimate 3D Printing Challenge

Deadline: December 31, 2007

A global design and 3D printing contest for high school and college students that awards scholarships to the winners. To enter the engineering categories, students need to identify an existing product and redesign it, making the original design better by adding new functionality or aesthetic qualities. For submissions in the art and architecture category, the emphasis should be on originality and the overall beauty or aesthetic



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Holcim Awards Competition
Deadline: February 29, 2008
These awards are an initiative of the Swiss-based Holcim Foundation to encourage and inspire a built environment that goes beyond convention to address the challenges of sustainability. The global competition showcases sustainable responses to technological, environmental, socioeconomic, and cultural issues affecting contemporary building and construction. The awards are open to anyone involved with projects in the area of sustainable construction—architects, planners, engineers, or project owners. Call 41 58 858 82 92 or visit www.holcimawards.org.

Open Architecture Prize
Deadline: Ongoing
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The Fulton Street Transit Center, by Grimshaw Architects is one of the case studies that will be presented at *Architectural Record's* 2007 Innovation Conference.

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Building Facades and Skins
-Advanced Facade Design, Marc Simmons, and Bruce Nichol, Front Inc.,
-William Zahner, president of A. Zahner Metals,

Transformative structures
-Chuck Hoberman, Hoberman Design

The Power of Design to Affect Transformation
-Gary Van Deursen, of Van Deursen Innovation and Design

Work in place: Case Studies of Innovative and High Performance Materials and Systems

Investigating the Art and Science of Glass and Light
-James Carpenter, principal of Carpenter Design Associates, and Davidson Norris, principals of Carpenter/Norris Consulting, Advanced Daylighting Systems

-Marilyne Andersen, PhD, Department of Architecture, at the Massachusetts Institute of Technology

Case Study: The Fulton Street Transit Center
-Andrew Whalley and Vincent Chang of Grimshaw Architects, with James Carpenter

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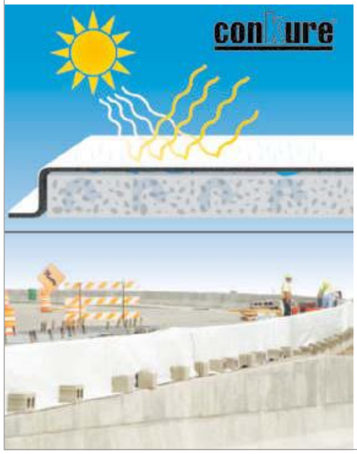

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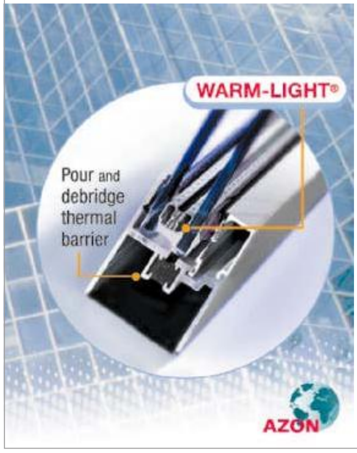
Melton Classics BALUSTRADES.COM web site provides the most comprehensive selection of maintenance free and low maintenance balustrade products, allowing the design professional to select the ideal product for any design, application and budget. Classic balustrade systems are available in integrally pigmented synthetic stone, marble/resin composite, cast stone, high density polyurethane, polyvinyl, and fiberglass in over 80 sizes and designs. Custom balusters, radius railings, radius stairs, and lightweight balustrades are available. They also offer architectural columns, cornices, and mouldings.

800-963-3060
www.meltonclassics.com

| Circle Reader Service #158

Extreme Performance Insulating Glass

AZON USA INC.



Warm-Light® spacer for insulating glass provides a more comfortable interior environment, reduces thermal conductivity and condensation on the glass surface while lowering utility costs. Azon is the global leader in developing technology for the manufacture of thermal barrier aluminum fenestration, commonly referred to as the pour and debridge method.

800-788-5942
www.warmedge.com

| Circle Reader Service #161

TO ADVERTISE: Contact Deidre Allen
T: (212) 904-2010 / F: (609) 426-7136
deidre_allen@McGraw-Hill.com

Translucent Insulated Skylights

CPI Daylighting, Inc.

CPI is a world class leader in the design and manufacture of translucent insulated skylights. CPI's unique translucent polycarbonate standing seam glazing system provides more value for your construction dollar than most other translucent daylighting systems. CPI systems are made with Pentaglas® Tight-Cell technology, one of the latest and most advanced systems for architectural daylighting applications.

800-759-6985
www.cpidaylighting.com

| Circle Reader Service #162

LEED® Contribution

Kalwall Corporation

Gathering LEED points through daylighting can greatly impact any project. Kalwall's highly insulating, diffuse-light transmitting, translucent skylights, wall systems and replacement windows are uniquely suited to achieve the desired results. The use of Kalwall could contribute up to 20 points within the categories of Sustainable Sites, Energy & Performance, Materials & Resources, Indoor Environmental Quality, and Innovation & Design Process.

800-258-9777
www.kalwall.com

| Circle Reader Service #165

Versatile Windows

Fenevations, LLC

Fenevations manufactures MegaWood, Infinity Bronze, and SteelView windows. Megawood offers fine hardwoods with furniture-grade finishes, combined with heavy gauge bronze or hand welded, aluminum extruded exteriors. Infinity Bronze is a unique thermally broken solid bronze system offering beauty, style and traditional sightlines. SteelView offers stainless steel beauty for contemporary designs.

908-688-5710
www.fenevations.com

| Circle Reader Service #163

Movable Glass Partitions

Luconi-usa

Osso is a real biomechanical sculpture, characterized by the peculiar aluminum bar, which has the double function of supporting panels and pieces of furniture. It stands simply and securely, either by putting pressure between floor and ceiling or can be self-supporting in some configurations, offering a wide range of panels and materials for partitions, doors, furnished walls, closets, desks, bookshelves, drawers and containers. This pure, functional element, like a dress, finds space in applications such as homes, offices, retail, kitchens and bathrooms.

310-734-8782
www.luconi-usa.com

| Circle Reader Service #166

Pre-Engineered Door Hardware

HDI Railings

From minimalist simplicity to stylish sophistication, HDI offers pull handles to suit every taste. Featuring nearly 60 distinct designs made from stainless steel, wood, glass and stone, you're sure to find a solution to your need. Many pull handles come in a variety of sizes, and the HEWI CombiSystem features a patented method of adjustment, allowing easy installation on existing doors.

717-285-4088
www.hdirailings.com

| Circle Reader Service #164

Built-in Sun Management

Major Industries, Inc.

Illuminate interior spaces with controlled natural daylight, all while gaining the benefits of reduced HVAC costs and LEED® credit opportunities. Guardian 275® Translucent Daylighting Panels feature integral water management systems and advanced anti-weathering technology for years of worry-free service. When your next project demands energy-saving, glare-free natural light, choose Guardian 275® Translucent Daylighting Panels from Major Industries. From pre-engineered Quick Ship™ skylights to custom-designed focal points, they're your one-stop source for quality daylighting solutions.

888-759-2678
www.majorskylights.com

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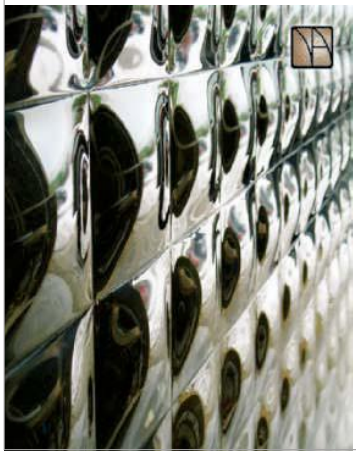
Convex Glass Pillows

Nathan Allan Glass Studios Inc.



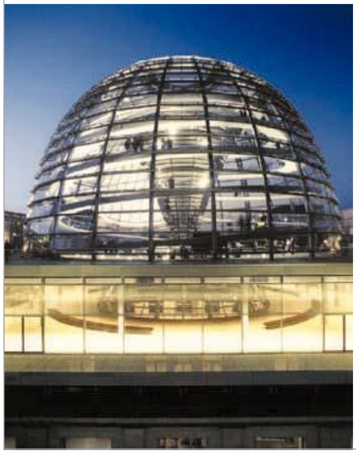
Convex Glass was produced and developed with the renowned architectural firms of Janson/Goldstein and Front Inc, in NYC. Convex Glass is the first real 3D Glass produced in geometric type patterns. Both surfaces are shaped so that dimensional viewing can take place from either side of the glass. Convex Glass can be produced in 1/4-in., 3/8-in., 1/2-in., 5/8-in. and 3/4-in. single layered panels up to 8'0 x 12'6, and can be safety tempered as well. Rectangular, square, and circle shapes can be produced. A unique method of casting allows panels to "fit like a glove", enabling successful resin laminating.

604-277-8533 ext. 225
www.nathanallan.com

| Circle Reader Service #168

Steel Curtainwall Systems

Technical Glass Products



Architects and designers now have a better way to incorporate large expanses of glass in building designs. European-designed SteelBuilt Curtainwall™ Systems from Technical Glass Products are strong and slim, allowing larger spans of glazing than aluminum framing and increased ability to bring natural light indoors.

800-426-0279
www.tgpamerica.com

| Circle Reader Service #171

Hurricane-Resistant Glass

Oldcastle Glass

Featured on the Ritz-Carlton Club®, St. Thomas, StormGlass™ —an Oldcastle Glass® exclusive—was chosen after other products failed. One look at the laboratory test results and it's not surprising that StormGlass™ is the glazing of choice for hurricane-resistant applications. In independent testing, StormGlass™ met test requirements for large glass sizes of up to 50 square feet. That means the freedom to design larger glazed openings while meeting the most stringent codes for hurricane resistance. And StormGlass™ employs the industry's most advanced interlayer technology (the thinnest of its kind in the hurricane-resistant glazing market).

www.oldcastleglass.com

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Doors for Interior Architecture

Woodfold Mfg., Inc.

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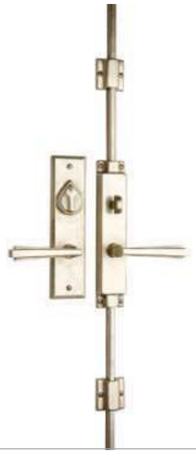
503-357-7181
www.woodfold.com/AR

| Circle Reader Service #172

Cremone Bolt/Entry Set

Sun Valley Bronze



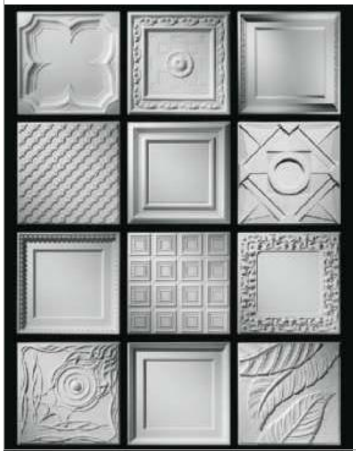
Elegant. Functional. Unique. The Sun Valley Bronze locking cremone bolt/entry set is now available for keyed exterior doors. Offered with any of their lever designs and in any of their eight beautiful finishes. Custom lengths, patio function and dummy function available.

866-788-3631
www.svbronze.com

| Circle Reader Service #170

Ornamental Plaster Ceiling Tiles

Above View Mfg., By Tiles, Inc.



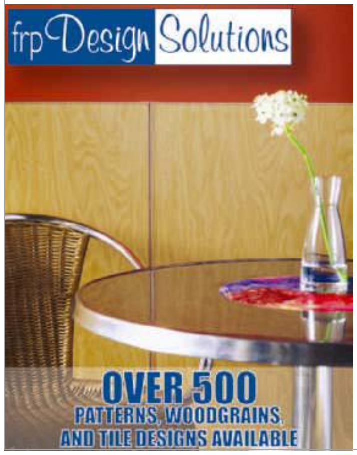
Above View ornamental plaster ceiling tiles are fabricated from a non-toxic, non-combustible, proprietary composition. They drop into any standard 15/16-in. T-Bar grid system. There are more than 50 standard designs, custom design work, and 1,300 custom colors and faux finishes available upon request.

414-744-7118
www.aboveview.com

| Circle Reader Service #173

Decorative Wall Panels

Crane Composites, Inc. (formerly Kemlite Company, Inc.)



frpDesign Solutions is a family of decorative wall panels that provides an alternative to traditional wall coverings such as ceramic tile, wood paneling or vinyl wall coverings. Offering both functionality and design, products in the frpDesign Solutions line are made of a moisture-resistant frp panel with a decorative finish that includes myriad colors, patterns, and woodgrains, as well as a tile-look panel. Available with over 500 choices, frpDesign Solutions is easy to install and maintain. For more information, visit Kemlite on the web.

800-435-0800
www.frpdesignsolutions.com

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| **Circle Reader Service #175**

Green Roof Systems

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Homasote Company, one of America's leading green building products manufacturers and nailbase roof insulation's originator, has received Factory Mutual approval for N.C.F.R.® Thermasote® on steel roof decks. Use it to specify attractive, residential-looking roofs for multi-family, mixed-use, commercial, medical and other construction. For an alternative green roof system, excellent for conventional and LEED® construction, specify Firestall® Roof Deck with N.C.F.R. Thermasote. Wind uplift tests show these Homasote® systems make code in wind-prone areas.

800-257-9491 ext. 1211
www.homasote.com/thermasote

| **Circle Reader Service #178**

Vertical Surfacing

Gage Corporation, Intl.

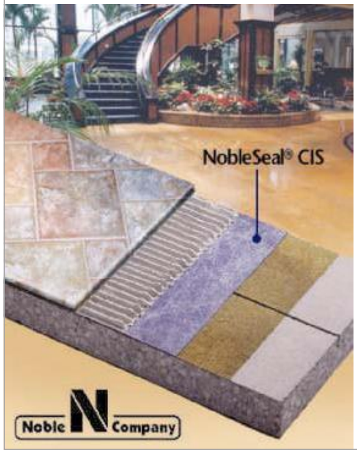
Gagecast® is a cast metal wall surfacing material suitable for a variety of interior architectural applications where patterns that feature high luster, relief, durability, and cost effective installation are a requirement. Twenty designs are standard; however, custom collaboration is encouraged. Gagecast® is one component of Gage Vertical Surfacing. Contact the factory for product literature and select samples.

800-786-4243
www.gageverticalsurfacing.com

| **Circle Reader Service #176**

Helps Prevent Cracked Tile

Noble Company



NobleSeal® CIS is a sheet membrane that protects thin-set ceramic and stone tile from cracking. CIS can be used over common substrates including primed gypsum underlayments and many wood sub floors. It's a proven performer with millions of square feet installed. CIS has been tested for "System Crack Resistance" in accordance with ANSI A118.12, and is rated "High Performance". Noble Company also produces sheet membranes for waterproofing and sound control. For more information, call 800-878-5788 or visit www.noblecompany.com.

800-878-5788
www.noblecompany.com

| **Circle Reader Service #179**

Porcelain Floor Tiles

Viva Ceramica

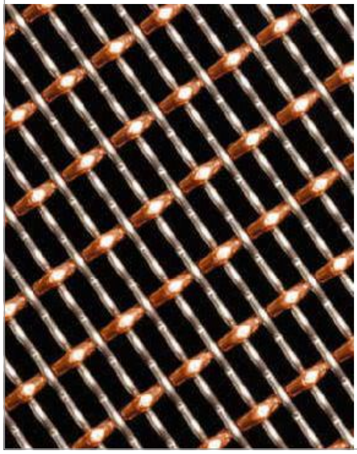
As is often the case, they were trying to achieve one thing and produced another. The press-glazed Pietraluna series is not glazed as such, but is created on the press using a blend of pigments and a porcelain tile body mix. In the classical 30x60cm and 60x60cm sizes and in 6 colors, the honed haematite gives the ultra-hard, acid-resistant surface a shine with "lunar" tints.

www.cerviva.it

| Circle Reader Service #180

Wire Mesh Systems

Gage Corporation, Int.



GageWoven® is a creative collection of 20 designs suitable for walls, elevator interiors, ceilings, and other architectural fabrication. Custom sizes and made to order panel systems are available. Custom designs are also encouraged. Contact the factory for literature and sample requests. Email gage@centurytel.net

800-786-4243

| Circle Reader Service #183

Architectural Signage

APCO Sign Systems

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In Use
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SMITH
27

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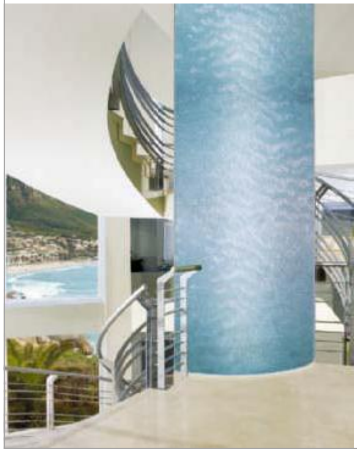
887-988-APCO
www.apcosigns.com

| Circle Reader Service #181

Cascading Water Features

Harmonic Environments, Inc.



Harmonic Cascade™ water features can be specified for any size and almost any shape in a seamless panel. Cascading water has a luminous quality and privacy can be maintained. This feature holds light very well when projected onto the surface. Please visit www.HarmonicEnvironments.com or call 800-497-3529 to discuss your project.

800-497-3529
www.HarmonicEnvironments.com

| Circle Reader Service #184

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www.coppercraft.com

| Circle Reader Service #182

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ICC approved PERMA•CRETE® surfaces provide architectural, load-bearing strengths of over 6,000 PSI compressive strength, and are sealed, nonporous, and chemically resistant to solvents, stains, temperatures and UV rays. The products can be applied over most surfaces including building exteriors, driveways, sidewalks, bridge decks and pool interiors. PERMA•CRETE® renews instead of removes, enhances property values, and is a cost-effective way of eliminating surface deterioration and costly maintenance.

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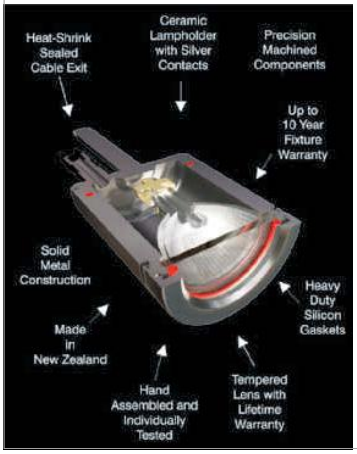
818-785-0171
www.modernoutdoor.com

| **Circle Reader Service #187**

Outdoor Lighting Fixtures

Hunza Lighting USA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208A-P			Brick Industry Association *brickinfo.org*
195	*68*		Brizo *brizo.com*
19	*12*	Ⓢ	C/S Group *c-sgroup.com/3000*
222			California Construction Expo 2007 *calconexpo.com*
223	*86*		Cascade Coil Drapery *cascadecoil.com*
63	*35*	Ⓢ	CENTRIA Architectural Systems *centria.com*
64	*36*		CNA AEC Design Liability *planetriskmanagement.com*
89	*46*	Ⓢ	Cornell Iron Works *cornelliron.com*
209	*74*	Ⓢ	CR Laurence Co Inc *crlaurence.com*
224	*89*		Creteseal *creteseal.com*
223	*88*		Dornbracht *dornbracht*
218, 229	*80, 97*	Ⓢ	Doug Mockett & Company Inc *mockett.com*
145	*52*	Ⓢ	Dryvit *dryvit.com*
60	*34*	Ⓢ	DuPont Corian *corian.com*
67	*37*	Ⓢ	DuPont Tyvek *tyvek.com*
220	*83*	Ⓢ	E Dillon & Company *edillon.com*
12-13	*9*		Eldorado Stone *eldoradostone.com*
51	*29*	Ⓢ	Electrolux *electroluxusa.com*
212	*144*		Eventscape *eventscape.net*
70	*39*		Finelite *finelite.com*
87	*45*	Ⓢ	Firestone *firestonebpco.com*
126	*49*	Ⓢ	Flexco *flexcofloors.com*
10-11	*8*		Gardco Lighting *sitelighting.com*
6, 200	*5, 71*		Glas Trosch AG *luxar.ch*
232	*101*		Glas Trosch AG *luxar.ch*
27-30	*17*		Gypsum Association *gypsum.org*
197	*69*	Ⓢ	Hafele *hafeleonline.com*
183	*64*		Hanover Architectural Products *hanoverpavers.com*
224A-B		Ⓢ	Hanson Brick *hansonbrick.com*
cov-4	*105*	Ⓢ	Haworth *haworth.com*
201	*72*	Ⓢ	HDI Railing Systems *hdirailings.com*
229	*96*		Headwaters Resources *flyash.com*
37	*21*		Hewlett-Packard *hpengineeringsolutions.com*
169	*62*	Ⓢ	Holcim Foundation *holcimfoundation.org*
148	*55*		ICI Paints Dulux *duluxpaints.com*
15	*106*		iLevel by Weyerhaeuser *www.ilevel.com*
226	*92*	Ⓢ	illbruck *illbruck-archprod.com*
231	*100*	Ⓢ	Invisible Structures Inc *invisiblestructures.com*
146	*53*	Ⓢ	IR - LCN *lcn.ingersollrand.com*
233	*102*		Jack Arnold Architect *jackarnold.com*
68	*38*	Ⓢ	JELD-WEN Windows & Doors *jeld-wen.com*
199	*70*		Kaldewei *kaldewei.com*
75	*41*	Ⓢ	Kawneer Company Inc *kawneer.com*
79	*44*	Ⓢ	KI *ki.com*
189	*66*	Ⓢ	Knauf *thinksulation.com.*
59	*33*		Kolbe & Kolbe Millwork Co Inc *kolbe-kolbe.com*
46	*26*		KraftMaid Cabinetry *kraftmaid.com*
170	*63*		Lamarite Slate by Tamko *lamarite.com*
4	*3*		landscapeforms *landscapeforms.com*
55	*31*		LG HI-MACS *lgcountertops.com*
217	*78*		LM Scofield Company *scofield.com*
229	*95*	Ⓢ	Lumicor *lumicor.com*
22	*14*		Lutron *lutron.com*
225	*91*	Ⓢ	Maple Flooring Manufacturers Assn *maplefloor.org*
7	*6*		Marvin Windows & Doors *marvin.com*
128	*51*	Ⓢ	MBCI *mbci.com*
221, 227, 229			McGraw-Hill Construction *construction.com*
231, 234-235			McGraw-Hill Construction *construction.com*
219	*82*		Modern Fan Co, The *modernfan.com*
125	*48*	Ⓢ	Nana Wall Systems Inc *nanawall.com*
163-167	*61*	Ⓢ	National Gypsum Company *nationalgypsum.com*
153	*56*		Natural Stone Council *genuinestone.org*
41	*23*	Ⓢ	Pella Windows & Doors *pella.com*
221	*84*	Ⓢ	PGT Industries *pgtindustries.com*
90	*47*	Ⓢ	Pilkington *pilkington.com*
233	*103*	Ⓢ	Pine Hall Brick Co Inc *pinehallbrick.com*
73	*40*	Ⓢ	Pittsburgh Corning *pittsburghcorning.com*
76	*42*		Quiet Solution *www.quietsolution.com*
231	*99*	Ⓢ	Rakks *rakks.com*
127	*50*		RHEINZINK *rheinzink.com*
14	*10*		Rocky Mountain Hardware *rockymountainhardware.com*
35	*20*	Ⓢ	Schott Corporation *us.schott.com*
5	*4*	Ⓢ	Sherwin-Williams *sherwin-williams.com*
187	*65*		Simpson Strong-Tie Company Inc *simpsonstrongwall.com*
232			Skyscraper Museum, The *skyscraper.org*
39	*22*	Ⓢ	Sloan Valve Company *sloanvalve.com*
228	*94*	Ⓢ	Special-Lite *special-lite.com*
56	*32*		Sugatsune America Inc *sugatsune.com*
16	*11*		Sunbrella brand fabrics *sunbrella.com*
2-3	*2*		Technical Glass Products *fireglass.com*
230	*98*	Ⓢ	Tectum Inc *tectum.com*
8-9	*7*		Thermador *thermador.com*
52	*30*		Timely *timelyframes/ar.com*
47	*27*		Trex *trex.com*
45	*25*		TurboChef *theovenreinvented.com*
227	*93*		Unico System, The *unicosystem.com*
78	*43*		US Green Building Council *usgbc.org*
cov-3	*104*		VERSA-LOK *versa-lok.com*
25	*15*		Viking Range Corporation *vikingrange.com*
48	*28*		VT Industries *vtindustries.com*
158	*59*		Walker Zanger *walkerzanger.com*
211	*75*	Ⓢ	Wausau Tile *wausautile.com*
147	*54*		Western Red Cedar Lumber Association *realcedar.org*
155	*57*		XL Insurance *xldp.com*
161	*60*	Ⓢ	Yale *reflectionsbyyale.com*

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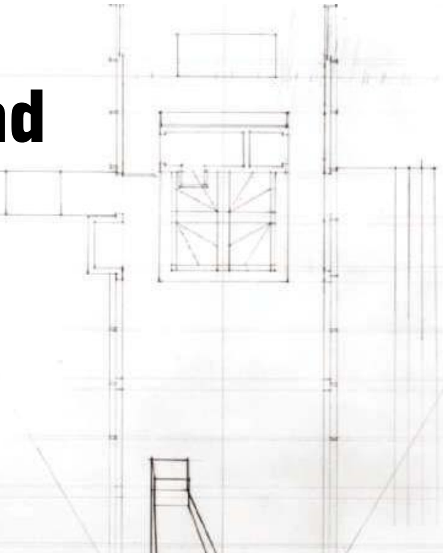
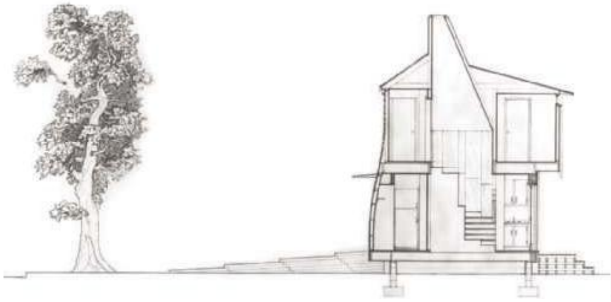
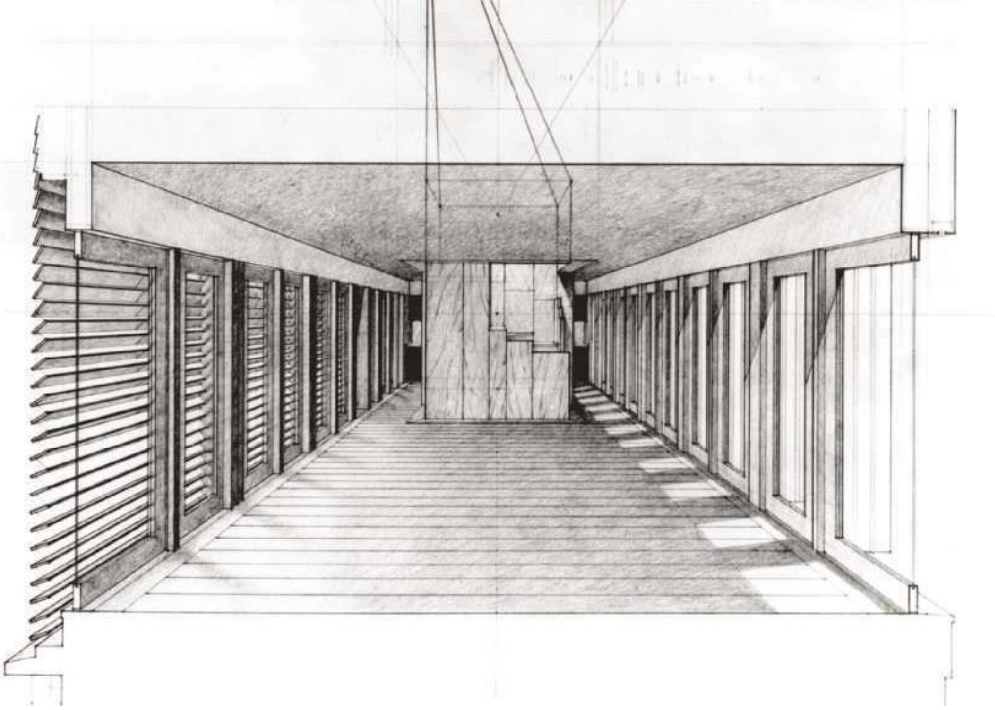
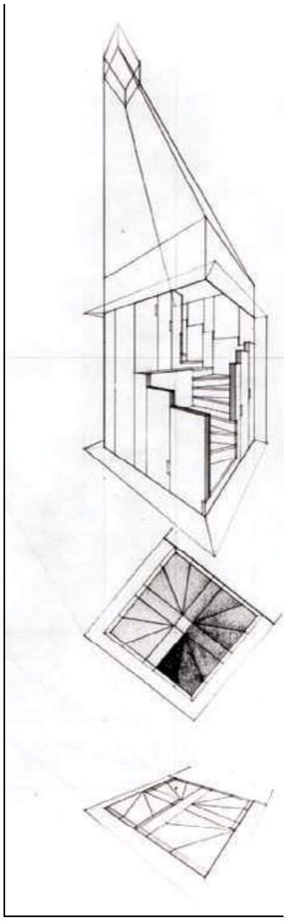






Mill Road House, Madison, Alabama, **pencil on paper, 1994.**



Office dA puts it down on paper

Monica Ponce de Leon and Nader Tehrani came of age as architects as the day-to-day practice of hand drawing for many designers was about to be snuffed out by computer graphics. When they formed their Boston-based practice in the early 1990s, they were just getting their feet wet with CAD. Today, Office dA, known for its precision of presentation and its fluency with both low- and high-tech methods of design and construction, employs a range of tools, like digital modeling and CNC milling. But it hasn't forsaken the art of putting pencil to paper. The Mill Road House, a speculative, unbuilt residence that won a Progressive Architecture award in 1995, was the first project the two worked on together professionally. Back in the old days, says Tehrani, he and Ponce de Leon drew everything themselves before opening up to the team. "There was a dyslexic moment in the studio when we didn't know how to engage with the staff," he says. "They would try to emulate what we were doing. That's not interesting. What needed to happen was for them to inherit an intellectual set of problems." Nowadays, Office dA's process is more collaborative: The two principals might be doing hand drawings as other members of their 13-person office work things out in CATIA, Rhino, or CAD. "Our drawings become didactic instruments," says Tehrani, "not only for building, but also for conceptualizing a project. We establish a relationship between drawing as a practice, geometry as a medium, and fabrication as its goal." *Beth Broome*

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